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VOCATIONAL EDUCATION

BY

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PREFACE

THE following chapters were outlined in 1905, while I was teaching history and social science in the State Normal School of Valley City, North Dakota. The circumstances occasioning their development may be of interest. Incidental to the work of instruction in history methods, the task of outlining a series of talks on the subject was undertaken. In deliberating on the aim of history study it was discovered that this could be settled only when the object of education had been determined.

During the time I was seeking to formulate the end of education, having in mind no educational preconceptions sufficiently ingrained to act as a limitation to free organization of thoughts about the matter of training, and being accustomed to view individuals as products and phases of the age-long historic process, the objective grounds of education were naturally evolved.

Such principles as this volume espouses were then developed. Some reorganization and addition of matter have since been made. While the form which the material assumes is not entirely satisfactory to me, I feel justified in issuing the work now. During the past two years it has been delivered as a regular course of lectures to the students in the College of Education in the University of North Dakota, and has elicited their hearty response and approval.

The essential ideas of this volume have been presented in

talks before educational meetings, from time to time, and have been favorably received. The manuscript is known to the chairman and other members of the Committee of Seven, appointed by the State Educational Association of North Dakota. It has their approval, and they have urged its publication. For these reasons, and because the time is ripe for such a work, I venture to place it before the public, trusting that the worth may exceed the defects.

The field of education contemplated is that of the elementary public schools. While the principles of social adjustment might very well govern all grades of educational effort, and while sometimes, in the course of discussing some phase of the general subject of training, the higher grades have been touched on, it must be borne in mind that only the schools below the secondary schools are explicitly involved.

JOHN M. GILLETTE.

TABLE OF CONTENTS

	PAGE
INTRODUCTION	vii
PART I. THE EDUCATIONAL RENAISSANCE.	
CHAPTER I. THE VOCATIONAL MOVEMENT AND CONCEPT.....	I
I. The movement for socialization.....	I
II. Vocationalization.....	7
CHAPTER II. SOME ACCOMPLISHED RESULTS	14
I. The case of Germany.....	15
II. The case of the South	23
III. Effect on remuneration	33
CHAPTER III. REACTION ON EDUCATION AND THE SCHOOL.....	35
I. On education and educators.....	35
II. On school attendance.....	41
PART II. SOCIAL DEMANDS ON EDUCATION.	
CHAPTER IV. SOCIETY AND THE INDIVIDUAL.....	52
I. The rôle of the social environment.....	52
II. Specializing character of society.....	63
CHAPTER V. DEMOCRACY AND ITS IMPERATIVES.....	75
I. The significance of democracy.....	78
II. Specific requirements of democracy on education.....	83
CHAPTER VI. IMPORTANCE OF THE ECONOMIC INTEREST IN SOCIETY AND ITS SIGNIFICANCE FOR EDUCATION.....	104
I. General sociological significance	104
II. Importance and intensification of production.....	109
III. Economics of consumption.....	121

	PAGE
CHAPTER VII. PATHOLOGICAL DEMANDS ON EDUCATION.	129
I. General causes of social diseases.	133
II. Defective education and social diseases.	138
III. The remedy prevention.	146
CHAPTER VIII. THE SOCIAL END OF EDUCATION AND OTHER ENDS.	161
I. Perfection.	161
II. Discipline.	166
III. Culture.	175
CHAPTER IX. STATE EDUCATION AND RELIGION.	186
I. Religion and morality.	187
II. Present practical difficulties.	191
III. The church responsible for religion.	198
IV. Historical confirmation of separation.	202
PART III. METHODS OF SOCIALIZATION.	
CHAPTER X. CRITERION OF SOCIALIZATION.	211
CHAPTER XI. SOCIALIZATION OF THE PROGRAMME OF STUDIES.	223
I. The tools of learning.	225
II. Information.	227
III. Moralization.	235
IV. Utilization.	239
V. Appreciation.	246
VI. Articulation of training factors.	247
CHAPTER XII. SOCIALIZATION OF SUBJECTS.	253
I. General consideration of criteria and methods.	253
II. The socialization of arithmetic.	255
III. The socialization of history.	262
IV. The socialization of other subjects.	274
CHAPTER XIII. SOME SOCIALIZED PROGRAMMES.	289
INDEX.	297

INTRODUCTION

[It is clear that enlightened public opinion is making new demands upon the teaching profession, and that the leading spirits in this profession are eagerly looking for the best way.] There is too much waste of life of child and youth; the real interests of pupils are not discovered, or they are trampled upon; and the school which might be the paradise of childhood is often its purgatory.

The writer of these chapters has endeavored to discover the requirements of the world, in which we live and has called upon his fellow teachers to respond to the call. He makes very much of vocational education; possibly he has laid relatively too much emphasis on this factor, but he has at least forced recognition of the moral necessity of earning an honest dollar. To the gleanings from wide reading the author has added some results of his own experiments. As he has written carefully a direct study of an industrial community in a great city and has also become acquainted with the moral situation in several sections of the United States, he has some peculiar qualifications for his enterprise. A person well trained in psychology and educational science may prepare an excellent work on the

fundamental principles of teaching, but one must live widely also among the people of the country to understand their particular problems.

There are many propositions in these chapters which cannot be altogether approved without further and critical consideration; but the survey is broad, the issues are living, and the contact with reality is beyond question.

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PART I

THE EDUCATIONAL RENAISSANCE

CHAPTER I. THE VOCATIONAL MOVEMENT AND CONCEPT

I. THE MOVEMENT FOR SOCIALIZATION

Recognition of the need of educational transformation.—One of the most impressive and unmistakable of the movements which are taking place in America, and which mark the age as a critical one, is that of educational transformation. While it is true that we are prone to behold things which our previous experience prepares and commands us to see, and while we may be somewhat subject to exaggeration, even to illusions at times, on this account, yet those who know what is happening in educational channels will hardly be able to characterize as an illusion or an exaggeration the assertion that there is on foot an educational movement almost amounting to a revolution.

The facts indicating the volume and profundity of the movement are eloquent witness to the truth of the statement. The files of the United States Educational Reports, those of the proceedings of the National Education Association, those of the various educational and other periodicals, the daily press, practical experiments conducted by teachers' training institutions, books on education, and the economic and industrial spirit of the age, — all alike testify to and voice the existence of the demand for transformation.

Current writings bearing on the general subjects of waste in education, and on the existence of useless material contained in our school curricula, are multitudinous, and express one of the chief phases of educational thought.

Organized educational forces are moving in the direction of making our school system more practical. Among the eastern states, Massachusetts and Connecticut have formulated legislation looking toward putting vocational training into the public school system. New York has legalized industrial education throughout the commonwealth. Farther west, the State Educational Association and the legislature of Illinois are coöperating in providing funds to send a commission abroad to study industrial education, looking toward working it into the schools of Illinois. Still farther west, in North Dakota, the State Teachers' Association devoted almost the entire annual session of 1908 to the consideration of vocational education, and appointed a Committee of Seven to work on the problem, how to reconstruct the schools of the state on more practical lines. The committee presented its report, outlining and recommending a vocational course of study for the rural schools of the state, to the Association of 1909. Its report was adopted and recommended to the State Department of Public Instruction. Hardly a teachers' meeting occurs nowadays which does not struggle over the problem of practical education. Special national industrial education congresses have been called into existence for its consideration.

This agitation for reform is not in the nature of a "fad." It is of too fundamental a character. There are those who have dubbed this movement for practical education a fad, insisting that it will pass like others of the "fads and frills"

which have got into the schools through agitation and the efforts of "reformers." But these people as little perceive the depth and portent of the matter as do those who refer to present political and economic reforms as phases of popular emotionalism. In the case of these social reforms, including the educational movement, the philosophy of the fundamental interests and organizations of society is involved; their very purpose and methods are in question; and the reformers see this too profoundly to be pacified into quiescence with a few superficial concessions. It is immaterial to the lasting welfare of humanity whether fads come in or get out of the schools; but the question of vocational education involves its permanent institutions and interests.

The place of change in securing progress. — The facts enumerated in the preceding section indicate that there is a deep-seated change taking place in the educational organization. Such a transformation will be welcome or not, according to our educational ideals, and also accordingly as we do or do not recognize the service which *change* performs in the general scheme of development. Let us denote this service.

If we were to take a scientific view of the creation of the world, of life on the earth, and of human society, we should at once recognize that the celestial systems and bodies, the geological formations of the earth, the various forms of plant and animal life, and the multitude of social institutions or organizations, have not always been as they are, but have developed into their present shapes and order out of preceding different ones. The astronomers, geologists, botanists, zoölogists, psychologists, sociologists, as scien-

tists, each in his sphere, try to trace the series of developing forms and systems, from the simplest up to the most complex. To do this is to get their history, to learn their true nature through their origin, and thus to come to understand them.

All this study might be done out of curiosity and wonder, just to satisfy a desire for knowledge. But it goes farther than that. It gives an understanding of the nature of the whole process of development. We see that there has been a real evolution; that things have grown not only bigger but better. Brain development has brought intelligence and wisdom. Perfected eyes have secured distant, minute, and easily adapted vision. Developed industry, inventions, education, government, and so on, have brought wealth and happiness to mankind.

Now, when it is seen that none of these greater benefits could have come to us without change, without transforming the old into the new, we are able to appreciate the service and sometime desirability of change. Evidently it is appropriate that we do not ruthlessly oppose movements which possibly may alter our educational system. We should not welcome changes just because they are changes, but should stand ready to welcome those which promise benefits, and ready to study and to understand them.

Causes of changing educational perceptions. — The movement for educational reform has arisen out of several perceptions. One of these is derived from investigations into school attendance and the interest of the pupils of elementary grades. It is found throughout the country that after the fourth or fifth grade, there is a rapid passing out of school. A minority of the children are left to complete

the eighth grade. Upon a search for the cause of this large departure it is found in the feeling of both parents and children that the schools do not give the training that is needed. Conspicuously, the boys lack interest in the academic training alone. Investigations in various cities, and the recent one made by the Massachusetts Commission on Industrial and Technical Education, amply bear this out.

Another perception comes from the growing sense of the importance of the economic factor in life, and of the need of training for it. A great many influences have conspired to make the economic relatively more important than other phases of life. The comparative exhaustion of the supply of free public land, the growth of cities with their economic problems, the increasing dominance of industry and commerce, a knowledge of the significance of vocational education in the development of Germany, the international competition for the markets of the world, with the obvious necessity for improved production at home, and an altogether better grasp by the public of the relation of economic conditions to society generally, are some of the important ones. The natural effect on education of this accumulating stress is to strengthen the belief in industrial and vocational training, all along the line.

Still another perception has come as a result of better knowledge of the individual in relation to organized society. The social sciences have thrown light on the individual, in view of his social origin, nature and destiny. He is seen to be a social animal, preëminently; and a mere individualistic pedagogy, and a system of education which seeks to train the child as if he were "going it alone" through life without regard to his fellows and to the organ-

ized social world of which he has to make use, are found to be inadequate.

When biological science has so long recognized the importance of the social environment in the genesis of the individual, as may be seen by inspecting literature on sex-relation, struggle for existence, rivalry, community life, gregariousness, division of labor, protective resemblance, mimicry, etc., which plentifully exists on these subjects, it is time that educational philosophy should incorporate into itself material which is demanded not only to make it truly scientific but also to make it thoroughly effective. Subtract the social matter from biology, and there is left an emasculated collection of data, which alone could not account for the genesis and nature of animal life. The psychology taught in our colleges and normal schools is almost wholly emasculated of the needed and legitimate social content and social context. One of the most needed reforms in the professional training of teachers is the adoption of certain phases of the social sciences, especially social psychology and sociology, into the training courses.

Meaning of socialization. — By socialization, in general, is meant the process by which an individual or institution is brought into conformity and coöperation with human society in its dominant interests and fundamental nature. The socialization of the individual is perhaps best exemplified in the development of the child under the influence of the home. By imitation and assimilation in the hourly contact with parents, brothers, and sisters, he follows the example set; realizes in himself the copies exhibited; drinks in the spirit and ideals of the home; and consequently develops

into almost exactly the same sort of person as are the elders. His average, his type, is that of the particular home in which he is reared.

Where home life is preserved, each home is a type somewhat different in its outlook and practices from surrounding homes. Were there not a continuous expanding, socializing process in the give-and-take of the neighborhood and of the larger community life, the type of social beings produced by the various homes would be so diverse that, in case the individuals met outside the homes without this previous preparation, they must almost necessarily come into conflict, because of differing ideas and habits.

It is by means of this socializing of the child through larger and larger areas or circles of the organized life of society, that individuals become like the preceding generation of men, and carry on the essential things of common life. It is also by this that society continues. It is fundamentally important for both the individual and society.

Taking over this thought for education, the socialization of education would consist in bringing the schools of a given society into essential accord with its fundamental spirit, interests, and organization. Since education itself is a social institution, it is susceptible of voluntary and immediate control on the part of society. The socialization of the individual must take place by a slow process of development. But education, as social organization, can be investigated and studied with reference to society; and if it is found to be out of harmony with the deepest interests and needs of the times, it can be somewhat abruptly reorganized and readjusted to the demands.

II. VOCATIONALIZATION

Meaning of vocational education. — *Vocational education* is a phrase which is rapidly coming into use. It is consequently desirable that its signification shall be made plain.

The phrase is a later one than "industrial education," which was used almost exclusively in the beginning of the movement to reorganize education on practical lines. Perhaps it is still the dominant expression, and probably the mass of people use it to describe the movement in question. But a little reflection will be sufficient to prove that "industrial education" is too narrow to express all that is contemplated by this agitation and movement to socialize schools. The phrase "vocational education" is broad enough in meaning to cover all the training courses which are needed to meet the practical demands of life.

It will be demonstrated in another place that vocational education is the logical demand of organized society. This, it will be shown, is true, because society is an organization of special structures. These structures arose out of vocational activities. In order to operate successfully through society we must be made able to use these structures by a mastery of their technique. But to come into possession of this technique, is to be vocationalized. To learn a trade, an occupation, or a profession, is to become possessed of a technique belonging to a specialized social structure or division of labor. To train for this elaborately, is to be broadly vocationalized. To train for it meagerly, is to be narrowly vocationalized.

To socialize education completely, would be to vocationalize it. To vocationalize it, would be so to reconstruct it

and to readjust it that it would harmonize with the exact constitution of society. But society is an organization of vocational structures. It is highly specialized. Education, then, must be as specialized as society. It must be vocational, because society demands specialized members to serve it successfully.

Vocational education also has regard to the constitution, inclination, or ability of the individual to be trained. It recognizes that there are fitnesses and aptitudes in life; that not all persons can do one thing equally well. In vocationalizing the schools, therefore, it is contemplated that ultimately every one will be able to find suitable training for his niche in life. Certainly if the child is worth educating, in himself and for human society, one of the greatest problems is to find where he can make the most of himself, and in what line he can prove himself most productive to society.

Society is already establishing agencies for ascertaining what the young human is most fitted to do in life. I have thought for many years that, with all our boasted science, we should be able to use laboratory methods in examining the child, in order to locate his inclinations, aptitudes, and qualifications. During the past two years this idea has been put in practice. By means of an endowment for the purpose, the late Frank Parsons established and conducted a vocational bureau in Boston. His account of its work is one of the most interesting and suggestive narratives in recent times. (See his account in the *Arena*, August and September, 1908.) Similar bureaus are being used in England.

Vocational education, moreover, views the individual as a member of the larger social order. While it insists that

he shall be vocationalized, it as emphatically insists that he shall be essentially cultured, and fundamentally moralized. To be essentially cultured is, for him, to have the information about himself, nature, and society, which is most immediate to his wants and safety. This is far different from culture as a preparation for polite society. To be fundamentally moralized, is to have instilled the habits, reactions, and outlook of good citizenship. Good citizenship consists in viewing conduct as related to social welfare, and as measured by it. To train for this, is broadly distinct from training into formal and traditional morals.

Vocationalization as the dominant educational end. — Thus vocational education is a practical and direct conception of the method of making young human beings fit for life.

As an end of education it is both an end or conception of training among other ends, and a dominant end to which all other ends are subordinate and contributive. Probably, so far, the great majority of educators think of it in the former light, as one among other ends. They recognize that education is preparation for life. It is a process of getting the various factors ingrained which the children, become adults, will need. Thus, they would say, to be fit to live, the child must have the skill of reading, writing, and arithmetic, he must have culture, such as is given in history, literature, geography, etc., he must have some moral training, probably connected with religion in most minds, and he must have a trade. In their minds it is a matter of simple addition. Add all the elements together and you have the school programme or course of study constituted. An educational schedule is made by externally juxtaposing

so many elements demanded by so many ends. But in a chemical combination the elements come together in definite proportions. Moreover a certain temperature is required that they may be organically fused. So in education this fusing process must take place.

In my view vocational education is the only logical and legitimate training. I justify this statement by my social philosophy. This position is demanded by the scientific conception of human society. There is not the individual and society, but the individual as a social product and in view of society. If the very constitution of this social world which environs him demands that the individual shall be specialized in terms of its nature, which in my estimation is the case, then the specializing of the child to meet the terms society imposes is the dominant thing. This is the great goal of education. All the phases or elements of education must be organized about vocation as the central thought and with a view to a particular kind of life. The cultural element must be selected with the vocation in mind, and must be focused on it. The reading and arithmetic, in their subject-matter, should be made contributive in a large measure to this future position in the world. And even certain phases of moralization might be gained from it.

It is the thought of his place in society that governs the educational factors, their relation to each other, and that fuses them into an organization. Thus no subordinate end or purpose should intrude, and set itself up as the chief object of education, in defiance of all the demands which organized life is going to make on the child, as has been the case so generally in the past. A principle would always

be present as a test and criterion of what to put into the course of study, and as a measure of how much.

“Vocational” and “industrial” education. — As has already been remarked, there are two terms in use which express the practical kind of education. It may be worth while to indicate why *industrial training* is not broad enough to cover the demands of education in America.

First, the public school system, in its various stages, should be made expansive enough to represent all essential lines of social activity. Evidently there are callings and occupations which are not industrial. The right of teachers, lawyers, doctors, farmers, and merchants, for example, to have a fitting for their spheres of work, is indisputable. Merely to put industrial training into the schools would not be sufficient to answer all the demands of adjustment. Only a fraction of our population is strictly industrial. If the school system is to be transformed so as to recognize the needs of all lines of life, it must be vocationalized, rather than industrialized. We want the great agricultural, commercial, and professional populations of our non-industrial regions represented in the transformation.

Second, the form which is taken by the introduction of the vocational factor into the schools is important to consider. In the older and more industrialized portions of our nation, the movement, so far, has chiefly consisted in preparing to establish, and in establishing, separate institutions or schools in which the vocational training is to be given. This has been the case notably in Massachusetts and in New York. Communities and neighborhoods may create special schools for industrial training.

Now, however fit this method is for such communities, —

and I believe there are signs that it will be abandoned in the smaller and simpler communities, — to very large areas of our country it is not appropriate. It is an unnecessary and wasteful method of attacking the problem of adjustment. It is wasteful because in order to do the work it founds a series of new plants which are quite likely to drive the former plants out of existence. At any rate, it requires the expense of creating and maintaining two sets of plants, whereas one set might suffice.

It is unnecessary in most cases, because our present schools may be readjusted in what they teach and do, so as to furnish the vocational — the practical — training desired, while at the same time they preserve the informational, the cultural, and the disciplinary features which they possess. It seems much better, and much more economical, to conserve the unity of our school system while we introduce the needed diversity. The *gradual* transformation of our present institutions should recommend itself to our American educators.

CHAPTER II. SOME ACCOMPLISHED RESULTS OF PRACTICAL EDUCATION

EVERY movement that bids for public approval must do so by means of results. These results may be those which have already been obtained. In this case, their enumeration and exposition are all the normal and unprejudiced mind will demand, in order to be convinced of the efficacy and worthiness of the movement in question. In the early days of a transforming process, as in the childhood or youth of a man, the effects and results are necessarily limited and prophetic. Yet there are many lines of social effort we approve merely because the principles they embody are full of promise. We believe in them just as heartily as if they had matured in fruitful results.

In the case of the educational renaissance, which now sets forward so impetuously, we have certain results which have been wrought out in the case of communities which have proceeded farthest in the direction of educational readjustment. While the business of this work is to state principles, demands, and methods, chiefly, and thus to furnish the grounds on which hopes of success may reasonably rest, it may not be amiss to indicate some actual results gained by schools conducted on more practical lines; and to point out others which might be presumed to follow upon the reorganization of our educational system

in general. Not all the valuable results are noted here. Others which are quite as valuable will become apparent in subsequent chapters.

I. THE CASE OF GERMANY

Perhaps the greatest object lesson in the direction of vocationalizing the schools for the masses exists in Germany. It is worth while to consider what has been done there in that respect, to note leading opinion as to its effect, and its consequent reaction on other nations.

Vocational education in Germany. — Germany is poor in resources, as compared with the United States, yet she has put herself in the forefront of the nations by concentrating on those she possesses in an intelligent manner.

“Well established politically, Germany began to apply her centralized power to the development of industry. This expressed itself in many ways; in protective tariffs, bounties and subsidies, but in no way with more energy than in industrial education, which was pursued with the inherited characteristic of thoroughness to which we have called attention. Students of industry became the advisers of the government; the scientists in the laboratories of the universities gave their services to agriculture and manufacturing; geographers and travelers studied with minuteness the physical characteristics of foreign countries; trade schools were established for the development of skilled factory labor and schools of commerce for the training of salesmen. Every resource of a paternalistic government was brought to bear to create efficiency, — efficiency in producing and efficiency in selling.” (Person, *Industrial Education*, pp. 7, 8.)

As an illustration of how Germany is bending its energy

and wisdom to develop vocational education, Prof. Paul H. Hanus's report on what just one city is doing is quoted:

"Since 1900 the city of Munich has gradually been transforming its 'continuation schools' for elementary-school graduates (corresponding to our grammar-school graduates) into elementary technical schools for apprentices in the trades and in business. The city now maintains thirty-eight different kinds of these schools, as follows: In 1900 were opened schools for butchers, bakers, shoemakers, chimney-sweeps and barbers; in 1901, for wood-turners, glaziers, gardeners, confectioners, wagon-makers, and blacksmiths, tailors, photographers, interior decorators, painters' materials; in 1902, for hotel and restaurant waiters, coachmen, painters and paperhangers, bookbinders, potters, and stove-setters, watch makers and clock makers, and jewelers, goldsmiths and silversmiths; in 1903, for foundrymen, pewterers, coppersmiths, tinsmiths, and plumbers, stucco workers and marble cutters, wood carvers, 'Schäffler,' saddlers and leather workers; and in 1905, for business apprentices, printers and typesetters, lithographers and engravers, building-iron and ornamental-iron-workers, machine makers, mechanics, cabinet-makers, masons and stone cutters, carpenters."

These are the chief industries of the city save that of beer, for the manufacture of which only higher instruction is given. A great many of these schools are not evening schools. "As continuation-school education is compulsory for three, sometimes four, years in Bavaria for all elementary-school graduates, the law requires employers to give their employes the necessary time — six to ten hours per week, depending on the school — to attend the continu-

ation school" for the trade or business in view. ("Technical Continuation Schools of Munich," *School Review*, Vol. 13, p. 678.)

Other illustrations may be seen in the case of Saxony, a diminutive state, which supports about 115 technical institutes; in that of Baden, which, with 1,600,000 people, spends \$280,000 yearly on technical schools; in that of Hesse, which, with 1,000,000 people, supports 83 schools of design, 43 of manufacturing industries. and many others for artisans of various trades. Prussia alone has over 3,000 industrial, trade, commercial, and agricultural schools with an attendance of over 200,000 students. In the city of Berlin there are over 40,000 students in supplementary trade, industrial, and commercial schools.

Germany has also recognized that the woman toiler, as the product of social and economic conditions, should be trained in accordance with these demands. Mr. Meyer, the United States deputy consul at Chemnitz, reports the provisions for training women. Private commercial schools for women founded in 1860 were soon followed by broader industrial schools known as the Lette-Verein. In these may be obtained knowledge of photography, and such callings as machine sewing, tailoring, linen sewing, millinery, washing, ironing, cooking, nursing, serving, domestic economy, embroidery, ornamental drawing, etc.

Other schools and industrial organizations followed in the wake of the great success of the former. Saxony, the greatest seat of German industry, employing the greatest percentage of women in proportion to population, had twenty-four special trade schools and fourteen general industrial schools for girls in 1899. Schools of domestic science, to

train for cooking and home duties, were also founded to check the tremendous tide of young women toward the workshops and factories; and their remarkably rapid growth attests their success.

It is interesting to notice the way American business and educational conditions are regarded by the Germans. The German investigators who attended the St. Louis Fair spoke "warmly of our natural resources, of our mechanical skill and progressive spirit. But 'they conclude that on the whole the American danger has been greatly exaggerated, and that a steadfast adherence by Germany to the educational system and commercial methods now in practice will leave the Fatherland little to fear in future competition with American manufactured goods.'" These critics "find us too self-satisfied, for one thing. We send trade agents abroad without preparation and without even knowing the languages they should use. Our higher schools turn out a few expert chemists, dyers and engineers. Our 'commercial colleges,' with their three months' courses, seem to the German visitors 'little better than a farce' as a substitute for a thorough business training. High wages, high express charges and the general heavy cost of handling business are other things held to be unfavorable to us in competition." "It is national foolishness to imagine that an American can pick up in a few weeks at work the knowledge his German rival has taken ten years to learn by well-directed study; or that a community overstocked with doctors and lawyers and understocked with trained captains of industry is well prepared to battle for world commerce." (*The Weekly World*, New York, March 16, 1905; Hailmann, *German Views of American Education*, p. 22.)

Leading opinions about Germany's advance. — There is now almost uniform agreement that Germany's great industrial and commercial development has been produced by that nation's systematic and wholesale encouragement and establishment of technical and commercial schools. Said President E. J. James a few years ago in an address at St. Louis:

"Other countries have not neglected this field so entirely as the United States. Few phenomena in the field of national and international trade have been more striking than the relatively rapid growth of Germany in the field of industry and commerce in the last thirty years. It is the opinion of all careful students of German history during the last generation that this result is to be attributed, more than anything else, to the clear perception on the part of the Germans that only the efficient and thoroughgoing education, general and special, of all classes in the community would enable it to overcome the serious disadvantages which distinguished its position as compared with that of England, for example."

Ernest L. Harris, United States Commercial Agent to Eibenstock, Germany, wrote in 1903: "Ten years' residence and study in Germany has led me to the belief that this Empire's greatest capital is its intelligence. A process of rigid training has not only enabled Germany to overcome the disadvantages of her geographical position, but the merchants and manufacturers of England find themselves face to face with the fact that German commerce has much more rapidly increased than their own, and that many markets in different parts of the world are being lost to their German competitors.

"One result of the neglect of commercial education in England is the inability of English commercial travelers and agents properly to represent the trade interests of their country. As a rule, these vital interests are in the hands of foreigners, who have received special commercial training in some of the many excellent commercial schools on the continent. It would be difficult to estimate how many young Germans are managing the correspondence in large English business houses. The advent of Germany upon the scene, as one of her keenest competitors, has caused some anxiety in England, and the cause which has brought about this result is now generally and correctly conceded to be the superior technical and commercial training accorded to the German youth." (*U. S. Education Report*, 1903, p. 654.)

Referring to the marvelous expansion of German trade the London *Daily Mail* of June 22, 1903, said: "It is, of course, impossible to locate with certainty the actual effects of any given cause, but there can be but little doubt that the growth of many immense industries is traceable to the system of education that has directed all the available powers of scientific knowledge and research upon industrial problems." (*U. S. Education Report*, 1903, p. 633.)

Similarly, Lord Rosebery recognized German superiority, and acknowledged its cause to be special training, when he addressed the London County Council, submitting a plan and offering a liberal contribution for a technical university which he urged that body to establish.

Says Howard, "In studying the educational methods and systems of Germany, therefore, we are dealing with one of the most fundamental causes of her recent industrial

progress. There is no doubt that it is his splendid industrial training which has enabled the German to overcome many obstacles in reaching his present industrial position; and to cope with the difficulties which other peoples have not had to meet; i.e. 'widespread poverty,' poor soil, and conservatism on the part of the people." (Howard, *Recent Industrial Progress of Germany*, p. 96.)

England's educational response. — England's movement towards establishing universities of a new type bespeaks her consciousness of the real problem confronting her. Civic universities in Birmingham, Manchester, Liverpool, Sheffield, and Leeds have been established within the last six years, and that of London has been reorganized and put on a working basis. Says Douglas Hall: "To the Briton of the future the early years of the twentieth century will be significant, not for the Boer wars or the fiscal campaigns which absorbed public attention in their day, but for the unobtrusive coming into being of these five great new centers of light and leading. The movement testifies to the revival of interest in educational matters apparent on all sides in England. America's commercial invasion, Germany's utilization of science in industry, Japan's new birth through education, have led to much searching of heart in Britain, and to a conviction that the educational system must be thoroughly overhauled. Hence the present fierce controversy over the elementary school provisions of the new Education Bill, the commissions of inquiry into secondary schools, and, finally, the doubling of the nation's university facilities at a stroke." (*The Outlook*, New York, Vol. 83, p. 979.)

"Not only are these universities strongly technological,

but they each and all lay stress on the branches of science of most useful local application. Leeds is the center of England's textile industry, and accordingly we find in its university a School of Textile Industries and a School of Dyeing and Color Chemistry, which are doing excellent work. Had such a faculty as the latter been established twenty years ago, England would not now be galled by the spectacle of her one time supremacy in the chemical and coloring industries wrested from her by researchful Germany. At Sheffield, appropriately, the Schools of Metallurgy and Mining are predominant. Liverpool, perhaps, is most famous for its School of Tropical Medicine, under Major Ronald Ross, famous for his discovery of the connection between the mosquito and malaria." This is because a founder works the coast of Africa, a region where tropical sanitation is needed. "The departments of marine biology and fisheries, of electrotechnics and physical chemistry, are also specially strong here. In Birmingham metallurgy and mining are prominent, and in Manchester much excellent research work has been done in chemistry and physics and their application to the Cotton City's industries." (*The Outlook*, New York, Vol. 83, pp. 983-4.)

The Japanese. — It would be interesting to learn what the Japanese are doing. It is pretty certain that those astute students and enterprisers are not letting lessons from the educational field escape them. Having referred to the effect of industrial education on Germany's advance, Person remarks: "The same may be said of the Japanese. Their development has been not less remarkable, and is to be attributed not less to technical education. For some years the Japanese have been sending young men abroad to

secure training in the military, naval, and industrial arts. We have just witnessed the remarkable results of such training for war; the results of the similar training for industry are not forced by circumstances into so high a light, but they are no less significant" (p. 28).

II. THE CASE OF THE SOUTH

The race problem. — In taking up a consideration of the South several interesting points appear. One is the recognition by the newer leadership in the South of the real causes which brought on the Civil War and created the difference in advancement between that section of the Union and the North. Another is the recognition of the need of coupling the education of the region on to the economic interests, in order that the region may recover its place of industrial equality with the North and the rest of the civilized world. Still another is the bearing industrial training promises to have on the future of the black race in its relation to the white race and to the rest of the nation.

On this last point it may be said that industrial training holds out more promise, in the way of establishing cordial and sympathetic connections between the two races in the South, than anything else. From a very careful study of the "race problem," I am firmly convinced that such a settlement as social equality is out of the question, since social equality means the right to intermarry under social approval, — a suggestion that brings a protest from all quarters. Political equality seems almost as far removed. At least it is conditioned on attainments along some other lines.

But there is an economic equality which is readily granted by the whites and which causes little or no friction. Blacks and whites meet and do business without friction, each race being accorded its place and rights. Both races line up at the Post Office for the delivery of the mail, or take their turn shopping at counters, in peace and order. It is only in connections where the question of ascendancy of race obtrudes that trouble arises. If the mass of negroes could be made valuable economic factors, intelligently efficient by industrial training, they would find economic recognition. On this basis, which must come before all else, political equality might be insured.

The backwardness of the South. — It is commonly understood that the South is exceedingly backward in point of industrial, commercial, and educational conditions as compared with the North. A trip through that portion of the country will convince anyone that agriculture is almost a generation behind agriculture in the North, and that manufacture and commerce lag. Also a cursory or careful examination of the diagrams of the amount of various manufactured products turned out by states, to be found in the United States Census Report of 1900, will demonstrate the leadership of the North.

Of course this backwardness of the South is due to the previous existence of slavery. History has shown that the economic system built up in the South, on the basis of slave labor, determined its political, religious, and educational institutions.* Slave labor, because of the low order of intelligence and specialization with respect to skilled

* J. F. Rhodes, *History of the United States*, Vol. I, Chap. 4; Coman, *Industrial Hist. of the U. S.*, p. 246; Bogart, *Economic Hist. of the U. S.*, p. 430.

employment, was fit only for the lower order of industrialism, — the agricultural stage. But slave labor, suddenly become free, was as backward in skill and intelligence as previously, and much less likely to lead a strenuous life of industry. Consequently the South has remained an agricultural region, with an unintelligent and shifty labor supply, and its other institutions have remained largely undeveloped.

Education and Industrialization the remedies. — The leading spirits of the southern states recognize the difference existing between the two sections, understand the nature of the causes which have led to southern stagnation, and consequently are able to prescribe the remedy for the evils. The traveler in the southern states in conversation with prominent and intelligent farmers, merchants, manufacturers, educators, and professional men, soon discovers that educational reform is held to be the panacea and regenerator. More education, better education, and, especially, industrial education, is demanded. A few typical expressions of this sentiment will be given by way of illustration.

“The long and bitter struggle between the North and the South, although waged apparently in courts of justice and halls of Congress, in pulpits and dining rooms, on decks of ships and fields of battle, was not political, nor legal, nor social, nor military, but educational and industrial. It was a struggle between the educated Yankee mechanic, astride the steam engine, and the educated southern planter, carrying on his shoulders the negro slave. . . . There was no need of Gettysburg or Appomattox. The contest had already been settled by mills and factories, the railways and steamships, the power looms and spinning jennies,

the reaper, binders, threshers, and other machinery of a people leading the world in mechanical invention, in use of machinery, in industrial progress, and in public education. . . .

"The South is now in touch with the world. She is educating her own children and the children of the recent slaves. . . . The problem is not political but purely industrial." With respect to that of the negro it is that of existence. "For this generation and many yet to come, there is need of radical change in negro education. His colleges of law, of medicine, of theology, and of literature, science, and art should be turned into schools for industrial training. Hampton Institute and Tuskegee should be duplicated in every southern state — if possible in each congressional district."

And concerning the whites: "The necessity of industrial education is almost as great for southern whites as for the negro. The industrial life of the New South must be based on education. The education of the New South must lead to industrial life. The southern schoolboy dream of statesmanship must yield to desire for workmanship. . . . The weavers of Asia are still using hand power. When they rise to steam and power looms the South must move up further or else be ruined. Industrial education is our only hope." ("Industrial Education in the New South," George T. Winston, President of the North Carolina College of Agriculture and Mechanic Arts, *U. S. Education Report*, 1903, Vol. I, p. 509.)

"Having made provision for the elementary education of the people on this broad plan, we may wisely turn our attention to the technical education. . . . The acquisition

of wealth must precede the cultivation of science. Technical skill is needed to utilize the raw material to the best advantage. The time comes, however, in the history of every nation when it must educate its people in science and train them in manufactures and industries or it will go down. This higher scientific education is the forerunner of higher prosperity, and the nation which fails to develop the intellectual faculty for production must degenerate, for it cannot stand still." ("Education and Production," Charles W. Dabney, President of the University of Tennessee, *U. S. Education Report*, 1903, p. 513.)

"It seems to me that for many years to come the education of the negro should be of a very practical character, such as given, for instance, at Hampton and Tuskegee. The prevalence and increase of crime throughout our country may well cause us to suspect that our system of education for the white people might also be improved by introducing more of the practical and industrial into our public schools." ("Negro Education in the South," Julius D. Dreher, President Roanoke College, *U. S. Education Report*, 1903, p. 523.)

Mrs. May Wood Simons writes, that there are three industrial or economic changes in the South which have a bearing on education. First, a growth in the cotton industry, from 180 factories in 1880 to 663 in 1900, which chiefly make coarser goods but are turning to finer grades for which skilled labor is demanded. Hence the birth of textile schools in that section. Second, the development of the iron industry with consequent demand for schools of mining and of engineering. Third, the growing consciousness of the need of better and more scientific methods of farming,

with consequent establishment of and demand for agricultural schools.

She indicates thus the sentiment in the South for industrial training: "To state that its importance is recognized is to describe the condition mildly. It is the demand of the hour. Unique conditions have met in the South. Passing suddenly from the eighteenth century social organization to modern industrial life, the problem arose of fitting her people to utilize her raw products. . . . The attitude of the southern public may be thus summed up, that it desires to give men industrial training that they may become more profitable economic producers, and thus increase the wealth of that section of country." ("Education in the South," *Amer. Jour. Sociology*, Nov., 1904.)

View of Booker T. Washington on negro problem. — No doubt among the most valuable, if not the most valuable, opinions on the proper training of the negroes are those of the eminent educators of that race, since they have more intimate knowledge and experience of the race difficulties, a warmer sympathy with the feelings and ambitions of the race, and a more certain instinct and apprehension of the agencies and remedies by which race progress is to come.

Mr. Booker T. Washington, as a conspicuous example, looks to the practical and economic basis of education, believing the negroes will succeed best by making themselves useful in the various lines of economic service which the South demands. He would, first of all, train for industrial competency, believing that this will bring desired levels of progress. "At Tuskegee," he says, "we emphasize two lines of work: first, normal teaching; second, industrial training. By the latter we purpose to send out young men and

women skilled in all these lines of industrial, agricultural, and domestic science and in the mechanic arts. We do not do this without a purpose, nor without thinking. We do it because we have studied the conditions of the ten million, in round numbers, of our people in the country. Unless this generation can be wise enough and brave enough, can be strong enough to put intelligent brains into these occupations, and thus lay the foundation deeply for the generations that are to come, it is impossible that we have a successful race in this country. Without the courage and patience necessary to the laying of this foundation, we shall find ourselves in the same condition as the unfortunate people of the three countries of which I have spoken.”*

In an article entitled by him, “The Negro in the New Century,” Mr. Washington wrote: “In the present condition of the race it is most important that, whether we give the negro youth classical education, common school education or industrial education, in some way we urge a large proportion of these individuals to bring to bear the force, the power of their education upon the common everyday, fundamental occupations that are at the door of each man in the community where he lives.

“There is no longer any question as to the ability of the negro to absorb knowledge or to perform all the processes of mental gymnastics that the white man performs, but the main problem is to teach him to apply his mental equipment, to harness it to the material things at his door that need to be done. If the negro student is to reside in an agricultural district, teach him to excel in all forms of agriculture. If

* From a Sunday Evening Talk to Tuskegee students.

mechanics is the main industry in his community, teach him that. If poultry-raising is in demand in the neighborhood in which the negro girl resides, teach her to raise poultry in an intelligent, scientific manner. In doing this you may miss giving her a classical education, but you will help lay the foundation so that her children and grandchildren can secure what the world calls the highest mental culture. . . .

"We must keep in mind — and this is the lesson that we constantly emphasize at Tuskegee — that thrift, economy, skill, property, intelligence, and Christian character are the fundamental things for the race to secure. In a large degree the negro is of an agricultural race, and we should seek through education to teach him to remain on the farm. We can do this by teaching him to put skill, brains, and science into agricultural pursuits."

Visible results of industrial and moral training. — In so far as vocational education, along with proper moral influence, has obtained in the South, the results are most gratifying and indicate larger beneficent consequences in future. There is no thought of slighting or disparaging the other parent schools of a vocational nature in this large reference to Tuskegee. What it is doing may be taken as typical of the work of Hampton and others.

In an able address at the Hampton Institute meeting in New York, reported by the *Tribune*, Mr. Washington said:

"Not a single graduate of the Hampton Institute or of the Tuskegee Institute can be found to-day in any jail or state penitentiary. After making careful inquiry, I cannot find a half dozen cases of a man or woman who has completed a full course of education in any of our reputable institutions like

Hampton, Tuskegee, Fish, or Atlanta who are in prisons. The records of the South show that 90 per cent of the colored people in prison are without knowledge of trades and 61 per cent are illiterate. This statement alone disproves the assertion that the negro grows in crime as education increases. If the negro at the North is more criminal than his brother at the South, it is because the North withholds from him the opportunity for employment which the South gives. It is not the educated negro who has been guilty of or even charged with crime in the South; it is, as a rule, the one who has a mere smattering of education or is in total ignorance."

Rev. R. C. Bedford, of Beloit, Wis., travels about continuously looking after the graduates of Tuskegee. His record contains over 5,000 names. He estimates that less than 10 per cent are failures in their professions and occupations. Such schools as Tuskegee receive large recognition at home and abroad, and the demands for their products are greater than the outputs in graduates. Here are illustrations from Tuskegee: "Of 525 young men who left the institute for the summer vacation, practically all were engaged for some kind of employment many days before the school term closed. One firm in Mississippi employed 25 students for the summer and sent tickets for their railway passage. In other cases agents representing various industrial plants came in person to urge students to enter their employment. Still others solicited students by mail and telegraph." And, says Mr. Washington, "those seeking the labor of our students were practically all southern whites. In the majority of cases the students were sought for labor which required not only skill but a high degree of intelligence."

Upon the recommendations of Secretary Wilson of the

Agricultural Department at Washington, three graduates of Tuskegee went to Africa in 1900 to teach cotton raising to the natives of the German provinces. At the end of the second year the officials were so well satisfied with their services that they sent for three other students and last year a hundred bales of cotton were shipped from Toga, Africa, to Berlin—the first notable invoice. From this time on the product will rapidly increase. Both the English and Belgian governments have also employed Tuskegee graduates to introduce cotton raising into their African colonies, and the government of Hayti has recently made propositions to a similar purpose. It has sent a number of young men to Tuskegee to be trained in farming. The government of Porto Rico maintains eighteen students at public expense.

The influence of Tuskegee on the negroes of Alabama is thus stated by W. E. Curtis:

“Not more than half of the work of the institute is done on the campus or in the auxiliary schools that are taught by its students. Two agents from the faculty are constantly traveling in Alabama, teaching the colored farmers how to live, how to work, how to make the most of their labor, how to improve their farms and make gardens, how to care for stock, how to raise vegetables, how to whitewash their houses, and handle their implements. They are continually holding local conferences in different neighborhoods, bringing the farmers together, and talking to them on practical subjects. Seventy or eighty farmers meet at Tuskegee every month for a conference and are taught by the members of the agricultural faculty, while an annual conference brings together several hundred every year. The

conference for 1905 has just adjourned. It was the most encouraging ever held, showing that the colored farmers of Alabama during the last year made more progress than ever before in history. More of them are buying homes and farms of their own, and working on contracts less. They are saving their money so that they do not have to mortgage their cotton in advance. They are getting better tools and better seed so they can make better crops. They are abandoning the one-room cabin, which is the curse of the South, and are building two, three, and four roomed houses. They are educating their children and extending the terms of the country schools by private subscriptions. The state keeps the schools open only three months, but by chipping in a few dollars each, the farmers in the neighborhood are able to extend the term to five or six months. The churches are making great improvements; they are getting rid of immoral preachers and driving them out of the communities. All this is largely due to Tuskegee influence."

There are seventeen like schools in various parts of the South founded, managed, and taught by Tuskegee graduates, none with less than 60 students, some with several hundred, altogether with not less than 4,000 men and women. Over two hundred graduates of Tuskegee Institute are engaged in yet other industrial schools.

III. EFFECT ON REMUNERATION

Industrial training and wages. — It was previously observed by Mr. Washington that the worth of Tuskegee graduates in terms of wages was increased threefold. Wages ought to coincide with productive capacity, other things being equal.

James M. Dodge, president of the American Society of Mechanical Engineers, sets forth the value of a trade school education. Mr. Dodge argues that an untrained boy of sixteen, in good health, represents a potential value of \$3,000 on entering a trade school or shop — that is, he is worth to his employer 5 per cent of \$3,000, or \$150 a year; that the shop-taught lad in nine years has increased this potential value at the rate of \$1,300 per annum, while the trade-school man's investment in himself has been at the rate of \$2,100 per annum. The untrained lad will earn \$15 per week at 24 years of age (and only 5 per cent of this class ever earn any more), while the graduate of the trade school reaches this earning capacity between 20 and 21, and is getting \$20 a week before he is 24, with unlimited possibilities for the future. Mr. Dodge urges, backing his arguments by facts and figures, that the best investment any boy can make is to "invest himself" by increasing his own potential value. This result, Mr. Dodge points out, is gained most thoroughly and effectively by training. ("The Money Value of Training," *St. Nicholas*, Nov., 1904.)

The Massachusetts Commission on Industrial and Technical Education confirms this line of statement. It shows that those entering shops at 14, at the age of 25 receive \$12.00 or \$13.00 per week, as much as they ever receive; and that those who have technical school training, entering industrial work at about 18, at the age of 25 receive as much as \$30 per week, and have successive advancement ahead of them. (Report, p. 67. See Person, *Industrial Education*, Chap. 6, for an extended treatment.)

CHAPTER III. REACTION ON EDUCATION AND THE SCHOOL

THE previous chapter has indicated some benefits which are becoming apparent as a result of the better articulation of the schools with life, in certain world communities; and future chapters will imply certain benefits which society should receive if the social demands on education are met. It may not be amiss to indicate briefly how education itself and the schools might hope to reap profit were this movement to be consummated. We might expect numerous effects of a beneficial character to ensue from the vocationalization of education. Some of these benefits we may consider to be the following:

I. EFFECT ON EDUCATION AND EDUCATORS

On the educational system. — One of the most desirable results of socializing the schools would be seen in education itself. As the means and method by which the young individual is made fit to live in society, and to bear the responsibility of its continuance and direction, its part of the cultural activities is as important as the task it executes. And the children it trains are the chief objects of social effort. "The sociological importance of children extends beyond the mere idea of perpetuating the race. They form the center of social activity and cause intense effort in their rearing and culture. Nor does this influence decline in the progress of civilization, but grows greater, generation

after generation, until to-day the child dwells at the center of civilization. For him we work and save, for him we sacrifice and live that he may be better developed than his ancestors, and be brought into a better environment." (Blackmar, *Elements of Sociology*, p. 221.) We might regard with delight, therefore, whatever promises to develop education.

There are two notable benefits which might be conceived to accrue to education from recognizing larger needs. The first is that education would evolve by becoming more differentiated. Differentiation is one of the essential marks of progress, and is necessary to growth. Growth of all kinds of organisms takes place as the structures become more specialized. Increasing heterogeneity, when accompanied by integration of parts, produces a higher and finer form of animal organism or of social organization. Mere multiplication of duplicate parts might give size but would not add quality to educational organization. Advance in quality can alone come by diversification of parts having differing needs to meet.

Of course, the general public is not directly interested in this line of thought, except in its practical bearing. The practical consequences would come in the shape of greater efficiency of the schools, by reason of their better adjustment to diversification of needs both individual and communal, and in the resulting greater efficiency society would have because its potential ability had been better discovered, trained, and distributed to the various callings of life. This would give a better balance to the social system and secure more frequent and rapid changes in the direction of progress.

A beneficial result would come to education in its scien-

tific and philosophic aspects. Educational philosophy has commonly been based on a foundation that has been too narrow and abstract. It has very often assumed the end which education is to meet. Or, if it has proceeded scientifically at all, it has not covered the whole ground relative to the individual, in that it has not treated the practical needs of life as exhibited in a study of his social articulations.

But a fully developed vocational philosophy of education would have to be exceedingly concrete and consequently diversified. On the vocational basis, there is not just one education but many kinds of training. They abound and will still more abound. The educational philosopher must know the nature of these vocations, and be able to state the principles which govern them, in order to be able to pronounce on what would be an adequate training in a given case. He must know the science of community life as well as that of psychology. Sociology would be competent to pronounce on the principles covering the relative values of courses, and psychology would say how and when the subject matter is to be imparted. Thus the science of education would look toward becoming an applied science, or at least to containing that feature.

Were the schools completely socialized by being vocationalized, certain desirable results would be gained by teachers.

Appreciation. — The first would doubtless be a better appreciation by the larger community. That educators are not the most influential and highly regarded members of the community in America needs no special proof. Perhaps in no other great nation do they stand so low in public esteem. In Germany, at least, the teacher is looked up to as the community's most respected personage. No doubt

a part of the regard comes by reason of his greater educational qualifications. Not every candidate with a minimum of training can be certificated to teach. Much of the regard comes as a consequence of the high value the Germans set on education. Under the old forms of education the Germans taught the teachers of the nations. Under the new forms it is assuming they are, to date, the schoolmasters of the world. They have stood for thorough training, whatever the form their training takes, and have respected their educators.

The Americans are practical people and are prepared to appreciate whatever appeals to them in this way. As fast as schools have been made to articulate with common needs they have gained the people's hearty support, and the instructors have risen in the estimation of the community. A closer concord of schools with people's interests, together with higher requirements for teachers, will do much to raise the standing of the latter.

Better economic compensation. — The economic standing of teachers would probably be improved. This would result from creating more positions and lines of work, from raising standards of ability and training so that the inefficient would be weeded out, and from rendering the work of the teachers in an economic way more productive to the community. It will perhaps prove profitable to expand the economic phase.

It would be true, as a general statement, to say that the scale of remuneration expresses the economic significance which society attaches to men's services. Small pay indicates that the work is not viewed as vitally productive. If a man can demonstrate that his services are directly produc-

tive of social well-being, of economic benefit, his remuneration will be liberal.

It is safe to say that no other line of educated men can show returns in emolument such as those of the graduates of the Massachusetts Institute of Technology. On the other hand, no other line receives such low pay as educators. Some comparison between educational workers, both in higher and lower branches, may be profitably made to elucidate this point.

In higher education a very few heads of departments or rare specialists in a very few heavily endowed schools may receive \$7,000 or \$8,000 yearly. "Columbia University has a maximum salary of \$8,000, but an average salary for full professors of \$4,289." The maximum in the University of Chicago for a department head is \$7,000; that for a professor is \$4,500. (*Bulletin Two*, Carnegie Foundation, "The Financial Status of the Professor in America and in Germany," p. 27.) But the teaching work is chiefly done by lower rank men in these institutions. Average salaries of associate and assistant professors, instructor, and assistant instructor, in these two institutions, are as follows: Columbia University (no associate), \$2,201, \$1,800, \$500; University of Chicago, \$2,800, \$2,200, \$1,450, \$666. (Same, pp. 10-11.)

Of the 470 in America, "it cannot be doubted that the degree-giving institutions vary from an average provision for the full professors of from less than \$500 a year up to \$4,788. Ninety-seven institutions pay an average of \$2,000 or over; only 20 pay an average of \$3,000 or over, and, as noted before, only 9 pay an average of \$3,500 or over." (Same, p. 29.) Those teachers under the rank of full professors receive much less.

It is found in the study of the salaries of full professors that men reach the position at the average age of 34, and receive an average salary of \$2,500. At the same age men in law, medicine, and scientific operations receive as much or more. But the teacher has reached his maximum salary, on the average. "The successful professional man, on the other hand, is just beginning to reap the substantial rewards of his ability and training — (and) rises steadily in the large cities to \$10,000, \$20,000, and \$30,000 a year, and in smaller towns to incomes not so large actually, but relatively large in proportion to the scale of living." (Same, pp. 23-24.)

Should we turn to lower ranges of educational work, we find, for the United States, "that in no section does the man teacher receive so much as 70 per cent of the average wage of all workers in other occupations than that of teacher; and that in the country as a whole, even on the untenable assumption that the average school year is nine months, the man teacher receives only 57 per cent as high yearly wage as that of the average employee in all other occupations. As a matter of fact, Commissioner Harris's report for 1900 (Vol. I, 717) gives \$342.36 as the average annual salary of men teachers in the United States for 1900. Using this as a basis, we find the average yearly salary of men teachers in this country is only 41.7 per cent of the average yearly wage of blacksmiths, carpenters, foremen in machine shops, machinists, and painters." (Report of Committee on Salaries and Social Status of Teachers, North Dakota State Educational Association, 1904, Bulletin No. 6, Dept. of Public Instruction, N. Dak., p. 8.)

One cannot predict just what benefit a better organized

system of education would have on teachers' wages. There are of course other factors working to keep low compensation, besides the one mentioned. Custom is certainly a very great cause of low salaries in universities and in other kinds of higher institutions. It probably is a powerful factor in the elementary schools likewise. A saner and juster point of view must be established in society relative to the teachers' remuneration.

In the lower kinds of public schools the predominance of women has a decidedly debasing effect on salaries. In industrial work it is found that in those lines recently entered by women in large numbers, the wages have fallen 50 per cent on the average. There, as in teaching, women do not expect to remain in the work long, do not have the professional pride nor the vital self-interest as a consequence, and are hence willing to accept a bare living wage.

We thus see that the subject of wages is a complicated matter. Yet on the analogy of other kinds of service, more productive work should tend in the direction of better financial reward.

II. ON SCHOOL ATTENDANCE

Elimination of pupils. — The second benefit education would derive from transformation into training for vocational ends would come in the shape of increased appreciation of the schools, and consequently an increase of attendance. There seems to be growing among the people the opinion that the public schools are not really vital agencies. There is great questioning of their serviceability, in many directions. It is believed by an increasing number of

parents that their children do not learn what they most need. Education and schools, consequently, are placed in the attitude of sufferance. Because of the lack of full appreciation, they want that dignity or standing they should have to be thoroughly effective. It is indefensible that the most important means of socialization should be so scouted. Could the schools be transformed so as to meet differing community needs, confidence would be restored, and educational effort would be rendered more efficient.

The studies which have been made of the elimination of children from the schools show that relatively few get anything like a modicum of education. Prof. C. M. Woodward made a study of elimination in St. Louis. His numerical diagram is reproduced on the following page and is self-explanatory.

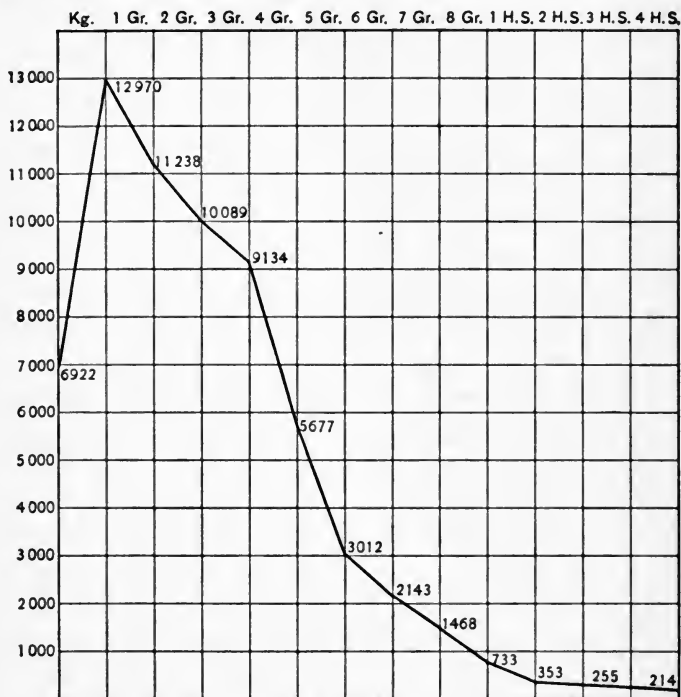
The letters and figures at the top of the diagram indicate the various school grades. The Arabic numbers, located at the points along the tracing line, indicate the enrollment in the various years.

The facts presented in this diagram are approximately typical of other places in and of the whole of the United States.

This study approximately shows that 50 per cent of the children left school by the beginning of the 5th grade, 75 per cent by the end of the 5th, 85 per cent by the 7th, and 88 per cent by the 8th grade. Some other cities, such as Chicago, New York, and Boston, were more successful in retaining the children in their schools. This report also apparently shows that but 5.6 per cent of the children of the first elementary grade entered the High School, and less than one half of this number remained in the second year of the High School. The number of children entering High School for

both city and country is probably far less than 10 per cent. (*Ed. Rev.*, Vol. 28, p. 191.)

Corrections in the above report would have to be made to allow for growth of population during the history of a



(C. M. Woodward, U. S. Ed. Rep., 1901, p. 1367.)

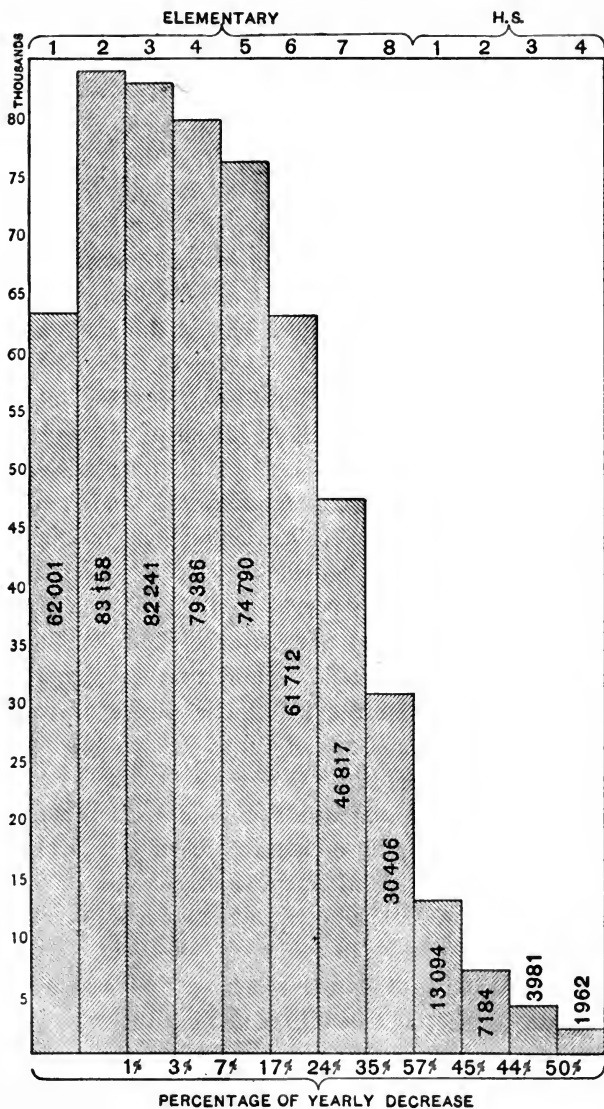
given set of pupils in their school career, for deaths, passages to and from private schools, etc. The percentages would be measurably smaller.

The cartogram on p. 45, of the attendance in the New York City schools, with the per cent of decrease from year

to year is self-explanatory. It is noteworthy that over 50 per cent of the number of pupils of the second grade is in the seventh. (From "A Suggested Readjustment of the Year of Study of the Public Schools of New York City," City Club of New York, 1908, p. 4.)

Professor Thorndike has made an exceedingly cautious and scientific investigation of elimination, and embodied it in a report for the United States Bureau of Education. ("The Elimination of Pupils from School," E. L. Thorndike, Washington, Government Printing Office, 1908.) His conclusions for the country as a whole are as follows: "At least 25 out of 100 children of the white population of our country who enter school stay only long enough to learn to read simple English, write such words as they commonly use, and perform the four operations for integers without serious errors. A fifth of the children (white) entering city schools stay only to the fifth grade." (p. 9.) "I estimate that the general tendency of American cities of 25,000 and over is, or was at about 1900, to keep in school out of 100 entering pupils 90 till grade 4, 81 till grade 5, 68 till grade 6, 54 till grade 7, 40 till the last grammar grade (usually the eighth, but sometimes the ninth, and rarely the seventh), 27 till the first high school grade, 17 till the second, 12 till the third, and 8 till the fourth It will be remembered that the figures for public schools in the country as a whole are probably much lower than this." (Same, p. 11.)

Cause of elimination. — We must notice the causes of this elimination. Thorndike says, "One main cause of elimination is incapacity for, and lack of interest in, the sort of intellectual work demanded by present courses of study." (Same, p. 10.) He further mentions poverty, without meas-



uring its influence, and the character of the population surrounding the school, which evidently includes a multiplicity of causes. He couples age with incapacity and interest. "Of the sixth or seventh grade population in Connecticut, the 14-year-olds are over one and a third times as likely to progress two grades farther as are the 15- and 16-year-olds. A child who does not get beyond the fourth grade by 14 has in Connecticut less than 1 chance in 30 of progressing to the eighth grade as against 20 out of 30 in the case of his brighter or more fortunate fellow who at the same age has reached the seventh grade." (Same, p. 14.)

The reasons Professor Woodward gives for the falling off in attendance are as follows: "First, a lack of interest on the part of pupils, a lack on the part of the parents of a just appreciation of the education now offered, and a dissatisfaction that we do not offer instruction and training of a more practical character." He goes on to say that boys and girls in the energetic period of 12 or 15 years of age find their controlling interests in *doing* things. "Their controlling interests are not in committing to memory the printed page; not even the arithmetic serves to reconcile them to school hours and school duties. They long to grasp things with their own hands; they burn to test the strength of materials and the magnitude of forces, to match their cunning with the cunning of nature and of practical men." The price of textbooks, after the fourth grade, is a great obstacle to the parent who wants to keep his child in school.

Professor Woodward would therefore find a remedy for the non-attendance, first of all, in making the schools mean something practical for life; and secondly in the introduction

of the free textbook system, at least in the elementary grades.

Prof. C. R. Henderson, writing of the causes of crime, says: "It is almost certain that the custom of confining growing boys to the mere conning of book lessons frequently irritates and maddens them, excites disgust for studies which seem to have no relations with their lives, and gives their muscles nothing to do. One thing shines out clearly from the record thus far studied: that the lack of instruction in manual and trade processes and of personal, moral, and spiritual influences must be charged with much of the tendency to crime." (*Dependents, Defectives, and Delinquents*, p. 250.)

The commission appointed by the Governor of Massachusetts to "investigate the needs for education in the different grades of skill and responsibility in the various industries of the Commonwealth," and "how far the needs are met," held twenty public hearings in all parts of the state. "The homes of children between fourteen and sixteen years of age, now at work, and the industries which they enter, were investigated—the study embracing a total of nearly 5,500 children in over 3,000 homes, and over 350 separate establishments, representing 55 industries. The salient features of the commissioners' conclusions are that the first years of the employment of those children who commence work at 14 and 15 are often waste years; that the children leave school because neither they nor their parents see any practical value in remaining there, but that a large majority of the parents could afford to keep their children in school for a year or two longer, and would do so if they had the opportunity of securing a training which

would make for industrial efficiency. This latter conclusion is of course based on an analysis of the income of the families, their intelligence and thrift." (*The Outlook*, May 19, 1906. Report of the Commission on Industrial and Technical Education, Boston, 1906, p. 18, especially pp 86 ff.)

The importance of interest. — Professor John Dewey, in his work on education, locates the chief defect of the school in its inability to furnish the conditions which bring out in children the needed motive. He says: "A society is a number of people held together because they are working along common lines, in a common spirit, and with reference to common aims. The common needs and aims demand a growing interchange of thought and growing unity of sympathetic feeling. The radical reason that the present school cannot organize itself as a natural social unit is because just this element of common and productive activity is absent. Upon the playground, in game and sport, social organization takes place spontaneously and inevitably. There is something to do, some activity to be carried on, requiring natural divisions of labor, selection of leaders and followers, mutual coöperation and emulation. In the schoolroom the motive and the cement are alike wanting. Upon the ethical side, the tragical weakness of the present school is that it endeavors to prepare future members of the social order in a medium in which the conditions of the social spirit are eminently wanting." (*School and Society*, pp. 27-8.)

Quotations and opinions supporting the proposition that mere academic studies are insufficient to secure the interest and attendance of growing, vigorous children could be

multiplied. The above are regarded as competent and illustrative. The evident task of the teacher and educator consists in establishing those conditions which inherently arouse the interest and consequently hold the pupils in school during a sufficiently educative period. It is believed, upon theoretical and experimental grounds, that the introduction of the practical motor element into school work largely supplies the vitalizing conditions. No doubt the simplification and rationalizing of the academic subject-matter would be of wonderful assistance in securing those conditions. Also, the utilizing of the group sentiment and coöperative tendency would be valuable agencies to accomplish this end.

The last two points will receive extended treatment later in this work. Let us here note a few facts bearing on the first point, that of practical activities.

Speaking of the benefits of the school garden, the principal of the Carp (Ontario, Canada) public school writes as follows:

"It is impossible to overestimate the value of school gardening on our boys and girls. Instead of being detrimental (as at first supposed) to their advancement in the other branches of learning, it has had the opposite effect. Since engaging in the work my boys and girls have been first in all examinations, competing with children from other schools, including city schools. The whole tone of the school has been improved morally, socially, and æsthetically. Our boys and girls have now a reverence for life unknown before, and it has awakened in them, as nothing else could do, a deeper interest in all life around them. It has helped to make school life a pleasure. Now the boys make the

excuse to get to school instead of the excuse to remain at home. It has aroused the interest of the entire community. The parents take a pride 'in our boys and girls in the school garden,' and never fail to bring their visitors to see the work that is being done there. The pupils learn practical gardening, and already their advice and assistance are often sought by parents and others interested in the cultivation of plants. Its influence is seen also in the homes of the pupils. Every home has its collection of house plants inside and its plot and flower borders outside. Our school board has come to realize the value of this work and is anxious to have it continued." (*National Education Association Rep.*, 1907, p. 423.)

Actual experience with industrial education in the schools of Menominee, Wisconsin, evidences the drawing power of vocational training. The superintendent of schools, President Harvey of the National Educational Association, states in an address, that since the institution of industrial work there, the attendance in the 6th, 7th, and 8th grades has doubled; that of the High School has increased 50 per cent; and that the High School graduating class has become over 50 per cent males.

The great interest of the masses in practical education is seen in response to vacation schools in the cities. For instance, in Chicago in 1904 eight vacation schools opened with over five thousand pupils. Several thousand children were turned away. In the Ghetto district admission tickets were passed on from child to child among the families, in order that all might be able to gain admission.

The popularity of these schools is based not on their so-called nature as "play-schools," for they do more real

work than regular schools. Housekeeping, sewing, cooking, pottery-molding and baking, gardening, laundering, and manual training are taught. It is this productive nature of child and parents which is appealed to. (Editorial, *Chicago Record-Herald*, June 8, 1904.) The *Chicago Inter-Ocean* says of these vacation schools, "It is safe to say that more was never done in the same length of time toward the making of good citizens." The schools all testify that little discipline is necessary. The unruly child finds his salvation in work.

PART II

SOCIAL DEMANDS ON EDUCATION

CHAPTER IV. SOCIETY AND THE INDIVIDUAL*

I. THE RÔLE OF THE SOCIAL ENVIRONMENT

It is evident, to the sociologist at least, that the social environment is the dominant factor for determining what educational training shall be. Hardly any builders of educational systems at any time have wholly disregarded the world the educated being is to live in. At best, however, the close dependence of the person on the nature of the social world has been seldom appreciated. Pestalozzi saw it vividly, viewing education as he did, as a means of reforming human society; but the accretions of formal pedagogy later buried his insight. More recently, the psychology of the individual has offered the basis and determining factor. But general or individual psychology gives as false a view of the person as the geocentric theory gave of the solar system.

Before we proceed to the specializing character of the social environment relative to individuals, it will be well to view the general bearing of society on the lives of men. Only those factors or phases which have been historically

* The larger part of this chapter appeared in the *Amer. Jour. of Sociology*, September, 1908, under the title, "The Sociological Warrant for Vocational Education."

operated in determining what men should be, as men, will come in for consideration for most part. Some others, which perhaps might be considered quite as important, receive treatment later in the volume, because their appearance in the later connections seemed to be demanded. While much emphasis is placed on the specializing character of society, as bearing on education, it is not intended that conclusions for education from the general force of the social environment should not be made. If the social environment is so profoundly important in determining the constitution and destiny of individuals, it should certainly be accorded a large place in the philosophy of education. It also follows that the study of society in the schools is deserving of greater emphasis.

Ethnological aspects. — Those who make the science of human society their business, and who are familiar with the beginnings of institutions, and with the development of collective life, agree that man as we know him, man as a highly personalized being, is the creation of associational existence. The class of scientists whom we know as ethnologists are able to trace the existence of human beings far beyond the period of recorded history into the Quaternary geological period. (Kean, *Ethnology*, p. 55.) The earliest cultural stage existed then. Man used the rudest stone implements. He was scarcely more than brute. Beyond that time it is believed he was developing out of the plane of brute existence. Thus there have been ages upon ages in which the personality and achievements of what we know as modern or civilized man could develop.

Professor Giddings (*Principles of Sociology*, pp. 221-229) has marked out in a most illuminating manner how it is

that man became a thinking animal. In his estimation the power to think, the power which elevates man so far above brute existence, grew in connection with the formation of *language*. Brutes have the beginnings of language, but have not developed it into symbols which may be used to express ideas freely. It was left to *man* to develop symbols. As fast as he did so he was empowered to think, and was stimulated to further intellectual endeavor. His mind grew with and as fast as his language structure and vocabulary.

The primitive man has few words and consequently few ideas. The average man to-day possesses a vocabulary of many thousands of words, and consequently has a greater advantage in ideation and expression. But it is to be remembered that both of these wonderful acquisitions came about through association. Men living together had to communicate in order to coöperate. Signs and symbols sprang up to enable them to communicate. Ideas and refinements of thoughts ensued. Hence, one may truly say that the mental powers and the communicating system are social products.

Professor W. I. Thomas makes an interesting contribution to the position that the social environment is the essential determining factor. He has conclusively shown (*Forum*, December, 1904, and *Source Book for Social Origins*, p. 171 ff) that the difference in attainment between the white race and more or less backward peoples of the world is not accounted for on the supposition that the white brain has developed either in size, weight, or constitutional arrangement; for Chinese and Japanese brains are as large, and individuals of inferior races, when trained and drilled

as thoroughly as whites, show equally advanced powers of skill, perception, inhibition, mentality, interest, etc.

The difference is really the result of differing social conditions, the "social inheritance" of Professor Baldwin. That is to say, it is this social inheritance which has been thousands of years in building, — incrementing a little each generation until it has become an entirely different environment for the civilized from that which the uncivilized inherit and are reared in; it is this medium of knowledge, ideas, methods, inventions, etc., which is brought to bear on the white child in his education and experience that makes him seem so much superior, mentally, to the savage or semicivilized.

"The fundamental explanation of the difference in the mental life of the two groups is not that the capacity of the brain to do work is different, but that the attention is not in the two cases stimulated and engaged along the same lines. Wherever society furnishes copies and stimulations of certain kinds, a body of knowledge and a technique, practically all its members are able to work on the plan and scale in vogue there, and members of an alien race who become acquainted in a real sense with the system can work under it. But when society does not furnish the stimulations, or when it has preconceptions which tend to inhibit the sum of attention in given lines, then the individual shows no intelligence in these lines." This may be illustrated in the lines of scientific and artistic interest.

Among the Hebrews a religious inhibition — "Thou shalt not make unto thee any graven images" — was sufficient to prevent anything like the sculpture of the Greeks; and the doctrine of the resurrection of the body in the early Christian Church, and the teaching that man was made

in the image of God, formed an almost insuperable obstacle to the study of human anatomy. This prejudice and preconception, on the part of the early Church Fathers, inclined the most of them to proscribe the reading of pagan literature, the best in the world, and hence inhibited the production of literature and development of education among primitive Christians. The modern Mohammedan hostility toward scientific inquiry comes out of the preconception that belief in God is all that is needed in life. So a disciple writes to a westerner, "Thou art learned in the things I care not for, and as for that which thou hast seen, I spit upon it. Will much knowledge create thee a double belly, or wilt thou seek paradise with thine eyes?"

"The Chinese are a people of great intelligence and the greatest size of brain of all races, yet all that equipment has been deflected because of the preconception that the dead past contains the sum of wisdom. They study long and intensely, but to the neglect of occidental science. They spend years in copying the poetry of the L'ang Dynasty, in order to learn the Chinese characters, and in the end cannot write the language correctly, because many modern characters are not represented in the ancient poetry. Their attention to Chinese history is great, as befits their reverence for the past; but they do not organize their knowledge, they have no adequate textbooks or apparatus for study, and they make no clear distinction between fact and fiction." Multitudes of their scholars are ignorant of the meaning of the history they read. All their higher learning is devoted to writing essays forever on their classics. No better illustration could be given to show how little acquaintance with ancient knowledge and ideals fits the individual so

engaged and engrossed with the business of the present. In fact there is ample evidence to establish the position that instead it really unfits him.

Social constitution of man. — A further consideration would demonstrate that the same social environment is the depository of the influences which determine the peculiar personal nature of the individual, and that it mediates to him, in the same manner as it does the material, the finer or spiritual goods of life. Prof. J. M. Baldwin has shown (*Social and Ethical Interpretation*) in detail how human personality is built up out of the material resident in the social group, through the interplay of the child with his colleagues. Let us notice some of the facts which indicate this social nature.*

1. As a physical being no one is a mere individual. The molecular vibrations of the external world, which constitute motion, beat and play upon an organism whose strings and keys come down from unnumbered ancestral lines. The body is a product of thousands of crossings, of countless interbreedings of near and remote progenitors. This may be brought home to us by considering how rapidly ancestors multiply as we recede into the past. You, for instance, have two parents, four great-parents, eight great-great parents, sixteen great-great-great parents, etc. Or the fourth generation removed, your line includes sixteen stocks of people, perhaps, or, it may be, one half as many races or even nations. The past physical individuals and races focus in you. You are a composite of all the past races and people in so far as they have intermingled.

* Professor Baldwin is only partly responsible for these points which follow. But his work referred to should be read by all educators.

2. In like manner, the individual partakes of the social cosmos in his mental constitution, by inheritance. The instincts and impulses even revert so far into the past as to relate him to the sub-human animals. So far as we are able to discover, the qualities of temperament, disposition, inclination, talents, and even genius arise out of and partake of the mental constitution of ancestral individuals. It is second nature to us when the child is born to begin to figure out, not only the physical similarities to the parent stocks, but, as the child grows, to attempt to account for peculiarities of character by identifying them with characteristics of relatives. What all do so naïvely the scientist does more systematically, until nothing is better established in biological and psychological scientific belief.

3. Also our social inheritance, given us through customs and manners, and which we imbibe in family and race life, — our morals, — likewise runs back, and radiates laterally as well, into the past races of the earth. These *mores* which we have thus come by and which exist in us to-day are the products of erosion, selection, and survival. Past social groups, with their customs peculiar to themselves, collided with each other in their wanderings. The process which followed upon this collision makes a large chapter in the sociology of conflicts. The fighting which took place is the least interesting thing. The long struggle of conquered and conqueror, of inferior and superior, as the races dwelt together, was bitter and profound. It was in this enduring period of race friction and amalgamation that the sets of customs, ideas, religion, and other characteristics underwent a transformation. The entire supply of neither party survived. It was a matter of selection and survival. Its

result was a total sum of group culture, considerably larger and more differentiated than that of either of the compounding groups. And if we reflect that this warfare and amalgamation between differing groups have been taking place time after time during the succeeding ages down to the present, we may conclude that our social inheritance, now, is a fabric composed of multitudes of group-culture strands.

As a consequence, we are compelled to admit that since the individual is built up out of these threads of influence, as they are given him by his parents and teachers through language, ideas, example, etc., personality is largely a social product. The quality of personality is the outcome of the inherited physical strain, worked upon by the cultural or social inheritance influences, from the very moment the child is born. Race, physical features, and possibly temperament, tendency to ailments, potential brain power, and quality of determination are some of the factors inborn to be molded into shape.

Probably none of these factors can be greatly changed. But without the molding and stimulating force of the social environment they would develop into a brutish animal only. The content, the intelligence, the mind and soul matter are grafted on or poured in by the influences of society. Hence personality rises as high as the grade of culture of the group to which the individual belongs. It also varies according to the type of culture of the group.

Society as opportunity. — The most thorough and scientific account of the force of the environment has recently been given by Prof. Lester F. Ward in his *Applied Sociology*. It has commonly been held that heredity is the chief factor in the production of men of genius, and that genius

surmounts all obstacles. Of course, in so far as it accounts for genius it will likewise account for all other grades of ability. In order to test the assertion that genius may rise superior to all obstacles, Ward makes a thorough-going study of the environment relative to men of merit, talent, and genius. He separates the environment into seven groups, physical, ethnological, religious, local, economic, social, and educational, determining the force of each of these in the production of men of merit in France and contiguous French regions from 1300 to 1825.

By tables, maps, diagrams, and analyses, which approach the matter from every conceivable direction and leave no way of escape from the conclusions, it is demonstrated that the cultural factor in the environment, — the opportunity of the individual to come into contact with the achievements of mankind in an appropriate manner, — is the prime condition to bring forward merit, talent, or genius. Urban regions are about thirteen times more prolific, on the average, in producing the meritorious, than rural regions.

But it is not the mere density of population which explains the difference, because many large cities are infertile of merit, while some small places, and the chateaux, have been more fertile than many large cities. "The result is that if France had the same relative fecundity in men of letters as Paris, it would have produced 53,640, instead of 6,382; if it had the same fecundity as the other chief cities, it would have produced 22,060; but if it had only the same fecundity as the rural districts, the total output would have been 1,522." (Lester F. Ward, *Applied Sociology*, p. 188.)

The explanation of this difference is due to a "group of

properties" possessed by the fecund cities: "(1) Usually these cities have been centers of political, ecclesiastical, or judiciary administration, which confirms what we have previously stated relative to the influence exerted by the political and administrative environment. (2) These cities have furnished particularly numerous opportunities for cultivating the acquaintance of intelligent and scholarly men, owing to the presence of writers, savants, distinguished artists, a numerous educated clergy, a wealthy nobility devoted to letters, etc. (3) They have afforded important intellectual resources, such as higher institutions of learning, libraries, museums, book stores, publishing-houses, etc. (4) Finally they have presented, relatively to other cities, a larger amount of wealth or at least a greater proportion of wealthy or well-to-do families." (Same, p. 193.)

As to wealth, its influence consists in the fact that it bestows leisure for self-improvement, without which ability would not be manifest.

Material welfare dependent on social agencies. — It may be worth while to indicate the close relationship between the individual and his environment, and how the social apparatus is the mediating agency between him and the ends of all his wants and activities, even conditioning his dealing with the physical environment.

A little reflection shows us that man's most immediate dependence for realizing the satisfaction of his wants is on social agencies rather than on physical conditions. It is true that, ultimately, the raw materials of food, clothing, shelter, permanent forms of wealth, etc., have to be extracted from nature. But two things, at least, are to be observed here.

First, social evolution has consisted in building up a network of agencies, structures, on the basis of division of labor and of occupation, which have rendered individual man the more independent of particular local and physical conditions, the farther civilization has proceeded. Three fifths of the population of the advanced civilizations, such as England and Germany, live in cities; and even one half of the population of a new country like the United States dwells in urban communities of two thousand or more inhabitants. The poorest of these inhabitants consume hundreds of kinds of articles they do not and cannot produce. They actually produce nothing directly from physical nature. All they have are social products borne to them and retailed to them by social agencies.

Even the atmosphere and climate, the freest of nature's goods outside of meteorological conditions, are affected by social agencies. Therefore, to get at the original supply of materials for life purposes which nature furnishes, man depends on and gets the use of a vast array of intermediary social machinery. Social organizations of all sorts exist to cut him off from and to connect him with nature. He can no longer exploit nature as a free individual. Political organizations in the shape of government exist to limit his attack. Originally "free goods" have become "property." Police courts and jails testify to this. Only supreme exploiters, talented and lucky individuals, may now make onslaughts on mines, forests, and lands, and this is done by getting control of great social organizations. Individuals independent of social agencies do not exist in society.

Second, the dominance of the social factor is seen in the fact that by means of social agencies, — improvements in

the way of inventions and technique, — the actual supply of material products in given areas to support life has been increased. The economic stages of society, such as the "hunting and fishing," the "pastoral," "agricultural," "commercial," "industrial," are only names to denote improved social means of getting a greater abundance of food from the earth. The "industrial revolution," together with the opening up of America, almost doubled the population of Europe in the nineteenth century. England's inhabitants increased from 12 to 18 per cent each decade or from 8,000,000 in 1800 to 30,000,000 in 1900 (Fetter, *Principles of Economics*, p. 194). There is no visible limit to population. When raising food by agriculture fails of further increase, direct and rapid production by chemical processes promises to continue.

II. SPECIALIZING CHARACTER OF SOCIETY

Social structures and human interests. — If it is true that the individual is absolutely dependent on the social organization for the satisfaction of his material interests, and that his personality is likewise dependent for its character on the spirit and reason resident in the fundamental technique of society, it becomes evident that education is unscientific and incomplete, in so far as it is not organized in view of the exact nature and pointings of society.

In order to get at the exact place education should hold relative to society, it will be necessary to discover the essential relation of the individual to organized social life. I shall seek to show that the individual's chief business is to participate in the process total society carries on, by means of functioning, in a more or less specialized way, dependent

on his ability and training, through the specialized agencies of society; and that the cue to this life-functioning is the line of his dominant or life-interest in terms of the social structure. I shall use interest in the objective social sense so admirably designated by Professor Small (*Amer. Jour. Sociology*, 6, pp. 64-5; *General Sociology*, Chap. XIV), and shall think of the special organization of society as the outcome of interest at work, as he does (*General Sociology*, p. 233).

It appears to me that the best way to get the correct idea of the relation of the individual to organized society is to fall back on the historical aspect. A review of the development of human society impresses on us the valuable perception that present social structures are, in origin, occupation groups, and fundamentally so in fact; groups which have grown up out of the persistent attempts of men to adjust themselves to each other, for the purpose of satisfying diverging human wants, and primarily to realize their own life-necessities.

When we trace the development of society from a simple group or groups into a great social organization, we see that it has occurred by the growing differentiation of one group into diverse parts through division of functions; or by the consolidation of various natural groups, primarily, and then the differentiation of the consolidated mass into separate parts, classes, or businesses. We perceive that all of this, however brought about, has been established in order that the life and welfare of one and all might be better realized. With primitive men there were few wants, and hence few vocations. The matter of adjustment was simple. To follow custom and tradition was the essential. But in developing to higher stages, wants multiplied and no one

individual could obtain the skill or facilities for supplying all of his wants; hence, separate vocations arose, in which one set of individuals prosecuted one line of business, another, another line, and so on. Persons of each vocation disposed of their surplus goods to others of other vocations that they might obtain the things not longer made by themselves. Classes likewise arose to supply functions and activities not productive of material goods, but needful to serving, regulating, and inspiring producers.

These groups or divisions of businesses, each almost infinitely differentiated to-day, *constitute the social structures*. They form the framework of society. They are the social organization. They are *interdependent* groups, because no one is complete in itself any more than the nerves or muscles of a physical organism can exist as independent entities. Each individual who has a function to perform for society must use some one or various of these structures in order so to function.

A necessary perception comes, by observing the growing differentiation of dominant interests of individuals, to keep pace with the evolving structures of society, and the reciprocal dependence of these interests and structures on each other. In savage society all members had about the same interests in about the same intensity. Both knowledge and economic activities were little divided and developed. Later, with the refinement of social functions, the vocational interests emerged. There appeared leaders and governors; men to control the spirits and to be the custodians of group traditions; those who should provide food and those who should fight. In time there emerged the fundamental lines of human interests, namely, the

political, the religious, the cultural, the economic, the domestic, and the sociability.

Relation of individuals to structures. — In this development lie two important transformations. First, interests, with their corresponding occupation, become distinctly separated, so that certain persons express their dominant interests in a definite specialized vocation or profession, and by it they minister to the general social necessities or interests in this direction.

Second, when society has expanded into national scope, and modern science and methods of industry have been introduced, each fundamental line of organization becomes so differentiated under the push of new demands that individual interests may realize themselves vocationally in any one of its many phases; and hence there are many kinds of specialized servitors ministering to each of the dominant lines of wants of a national society. While we have the fundamental human interests still, and each interest expresses itself by means of special institutions or organizations society has developed for that purpose, yet each kind of institution is constituted of subordinate organizations.

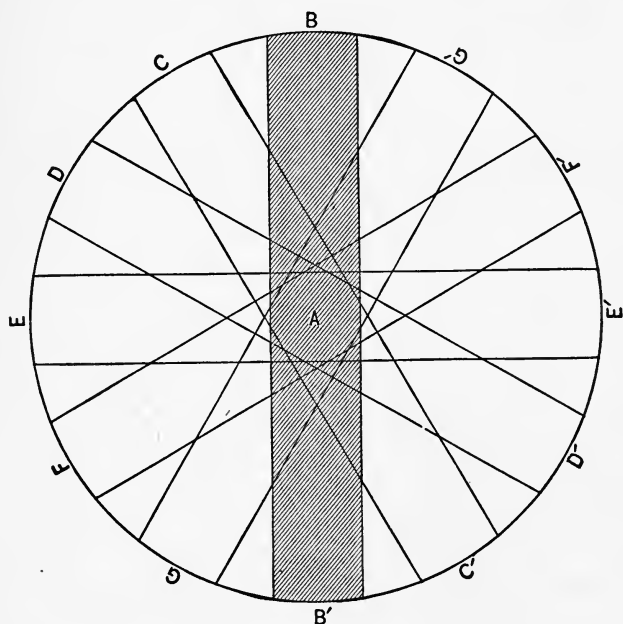
Thus to-day we may say that every one in society is interested in *political* activities; some more, some less. To meet the social interest and demands of this type, there exist the political institutions and organizations. They are a group, not merely one. They are complex, not simple as formerly. In this group we have all the complicated machinery of governmental administration, legislation, and justice; political parties with their complicated organizations and agencies; constitutions, codes, and customs of law. Some men are fundamentally interested in political insti-

tutions, and devote themselves to some phase of political life, vocationally. All members of our society are interested in our political institutions, secondarily, in that a certain and definite range of their social needs finds satisfaction through them, and their wants are ministered to by the professionals in politics.

In the same manner, the *economic* line of activities has become highly diversified. It is no longer merely food-getting and preparation, and that immediately. It is now extraction from soil, forests, mines, and waters of not only foods, but of all sorts of material to be worked up into thousands of forms to meet man's expanded diversification of wants. It is the skilled and specialized preparation of all this raw material, in multitudes of varieties of factories and manufactories, for final economic consumption. It is the transportation of all this raw and formed material to and from mine and farm and factory and forest and thence to wholesalers and retailers. It is the wholesaling and retailing of this produce, raw and formed, to all buyers and consumers. It is the clerical, the financial, and the managerial activities which go along with these various lines of business and make them possible. Anyone who makes a business of life in any phase of this complicated industrial field and labors to produce to the satisfaction of the economic wants of the rest of society is professionalized, specialized, and vocationally economic. All other members of society are secondarily interested in his vocation, to the extent that their wants are to be satisfied through him.

The *cultural* line of activities to-day is no longer simple, as it was in traditionary times. It comprises, in its organized scope, not only all systematic educative endeavors, but

also all informational agencies represented in press and platform, clubs, societies, Chautauquas, etc., and all æsthetic agencies. The *religious* phase is likewise differentiated into ecclesiastical denominations and sects, societies, organizations, and clubs. The *sociability* line expresses itself by means of many kinds of societies, clubs, etc. The domestic institutions alone remain essentially simple.



In order that it may be clear what is the relation of the individual to the whole of society, by means of these groups of social organizations, the accompanying diagram is presented.

Let the circle represent the circumference which incloses the total society. *A* is an individual so placed that he is shown to be in relation to each institutional area. The spaces between the parallel lines, *B* ending in *B'*, *C* ending in *C'*, *D* ending in *D'*, etc., represent the great groups of organizations through which the dominant interests are realized. *A* has his vocationally dominant interest in *B B'*, and works through it chiefly. But at times he acts or may act through the others, his relation to them and his use of them being subordinate to the relation and use of his vocational line.

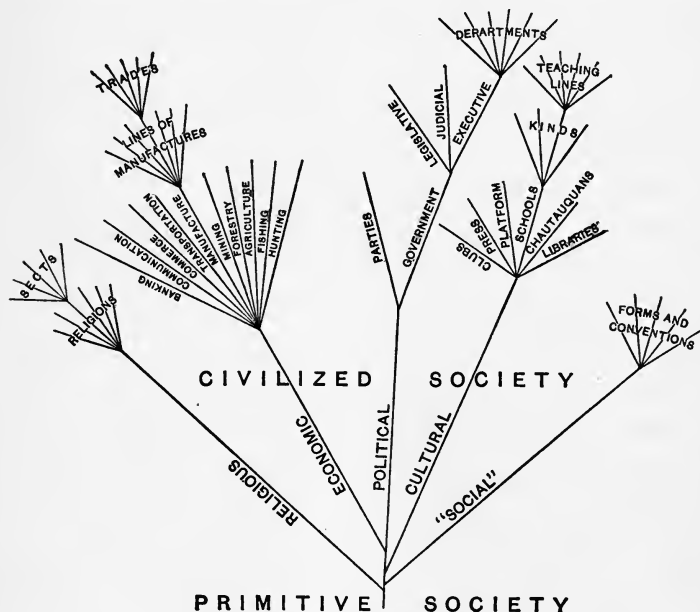
In a more concrete way, it is possible to illustrate this differentiation of structures, and the setting aside of individuals to represent them as specialized agents. This differentiation has proceeded more rapidly during the last 150 years, since the age of invention introduced the "Machine age."

Nearly all of our machinery has come into existence, has been invented during that time. The steam engine only goes back of it a little. Now, every important machine invented has called into existence a special set of workers, adding to the economic structure a new group. Perhaps it may create many new sets of special workers. Thus the invention of the locomotive brought in our great railway transportation system, with hundreds of kinds of specialized workers. It created locomotive engineers, brakemen, firemen, conductors, section hands, station agents, car builders with a host of specialists, locomotive builders, with many classes of skilled workers, etc.

Every great invention has proceeded in a similar manner. Think of the hundreds of thousands of patents the Patent

Office has issued. Many of them cover some great machine or utility which issues in a new calling. At the beginning of our nation none were issued. Hardly any inventions were then made. Now our government issues some 35,000 patents per year.

The accompanying diagram illustrates the growing specialization of social structure. Most of the development seen



in the modern age is relatively recent. Just enough lines are drawn to indicate types of development. Thus, manufacture breaks up into lines, each of these into skilled trades. The same would be true of the other economic phases.

The same holds of the other fundamental structures.

The administrative branch of government, for instance, breaks up into departments and each of these contains a multitude of special kinds of work, or functions.

Generalizations. — Several things are apparent at this point. First, society is a unity of specialized structures, each with a particular line of functions to perform which is necessary to its integral life, that is to say, the life of all the participative members. The perfection of this organic body, this unity of interdependent, coöperating structures, depends on the completeness and validity of each of the fundamental structures and subordinate groups. Should any one line become defective, or too large or too small relative to the other lines of activities, the equilibrium of the whole would be disturbed and its life impaired. This means the impairment of all the other structures, and this in turn means the impairment of the lines of the individuals constituting these structures.

Second, the trend of society is toward more vocations. Society is a very definite affair instead of being, as many suppose, a great hazy, inchoate, lumbering lump of human protoplasm, which may be butted into and attacked in any ill-considered and unspecialized manner. The significance of social evolution is that society becomes more and more specialized, breaks up into more vocations and divisions of labor, demands an increasing number of specialists to perform its functions. And looking to the future we must expect that this tendency is to continue, and even to become more intense as scientific and business methods and organization expand and penetrate the mass.

Third, in order to be able to adjust himself, that is, to be efficient, the individual must be specialized. Since society

has developed into a great organization of specialties, it insists that its members shall be specialized that they may take part in the integral social process. Just as the physical organism finds no use for the cell which is not specialized to act as muscle, nerve, blood, or tissue cell, but attempts to rid itself of non-specialized cells when they appear in it; so society demands that each of its constituent members shall be skilled and trained into fruitful contributors in some group of its special structures. The least specialized, such as unskilled laborers, tramps, hoboos, and idle rich, are either not prepared to participate in the vital processes of society by reason of being little specialized or else refuse to take part according to their training. Ability to adjust oneself means just the possession of the technique of a certain structure or certain structures. These we have seen are occupational lines. Of course this does not mean that every one must be a social philosopher or scientist or entrepreneur. Specialization means skill and technical ability in a given line. To have a trade or a profession is to be in possession of this specialization.

Education a specializing process. — The bearing of the foregoing on education must have become apparent. If education as a process is training for society, then we know what it should be and do. For we have shown that training for society can have no other meaning than fitting to participate in the actual social process. And this participating in the social process means the social adjustment of the individual through and by means of the actual agencies and structures society has developed. Only those possessing the technique of vocational lines are fitted to make this adjustment.

The assumption of state education is that its training is necessary for citizenship, that is, to be a valid member of society. But since one can be such only as he is able to function in society, that is, work in society, according to its fundamental nature, and since society is essentially specialized and vocational in constitution, it follows, that to make citizens in the best sense is to vocationalize them, make them able to further some dominant social interest. To be unspecialized is really to be socially functionless, to be without a serviceable articulating position in the social organization. Logically, all ranks of those trained at the hands of the state are imperatively adjured so to fit themselves. Otherwise the state taxes those functioning, those who are productive socially, to give a general education, which means an unspecializing, decentralizing, distracting period of diffused cultivation to those who consequently will be floaters and parasites, until by experience or further training they obtain a real working connection with society. When nine out of every ten children in the common schools of the United States are leaving school before the close of the elementary grades because of a lack of practical interest in the work now offered, it is high time that means for the betterment of the schools should be considered.

If this view of education, as an undertaking by the social body itself to fit an individual to carry on smoothly in conjunction with others the work necessary for the highest and fullest life of all, is correct, the further idea at once comes, that since society is progressive, since social demands change from time to time, since each generation and age has its own spirit and ideals to realize, education cannot be a static, changeless scheme or system. It must be elastic

and progressive to be always effective. It must keep in harmony with the age. It must plant itself securely in the center of the social process and there abide in order to minister adequately to the demands of its master, society.

It may be said that it is the business of leaders of society, and therefore a part of the duty and work of educators and educational systems, to act as regulators and conservers.

There might be a measure of justification for such a view. Education has commonly held the position of a brake to social progress. Possibly the service is at times needed, yet seldom has evolution of society gone dangerously fast. All the virtue there is in conservatism is just in keeping things from going too fast.

But could we discover how education may be put to the real service of regulating and correcting the ills of collective life, and then could we prove ourselves skillful enough to actually make it work effectively, the event would mark a milestone in human progress. In no case must the attempt be made to direct social currents far out of their predisposed and historically natural channels, however. This would be to defeat the laws of development.

Thus to-day we are in a position to see that Rousseau's proposal to educate the individual apart from society so as to give him a natural training, to make him a natural individual, would be quite an unnatural and preposterous method. We now see that we need to find how really to educate the child into collective, coöperative life of the modern sort, and that our danger now is in preserving a formal process that defeats this object.

CHAPTER V. DEMOCRACY AND ITS IMPERATIVES

UNDER the development of the demands which democracy makes on education to-day, will be discussed several topics, such as coöperation and culture, which might be expected to appear in separate chapters. Yet as they are involved in the thought of democracy, their consideration here is justified.

It will be discovered that both culture and the demands for vocationalizing individuals have been treated in other connections. Their treatment here is not an oversight. The idea of democracy touches both subjects on new sides. Here the emphasis is placed on *rights*. The demands of democracy grow in the measure to which *rights* of the people are developed. The masses have more rights than ever before. There is more democracy. This democracy demands more things for the masses. In a democratic society and age, education must be viewed, therefore, in relation to the rights of the people to have their fundamental needs met.

Non-democratic features in education.—It would be unworthy of a lover of our public school system to fail to recognize the great influence there is in it, working for democracy, from kindergarten to university. "It takes the child from infancy, brings him into contact with his fellows, induces, inspires, controls, educes him, until the age when he can coöperate with adults in the working world. It is the most reliable socializing institution of a public nature.

Raw material is thrown into this great hopper from all races and nations, and ground into an essentially common grist. It is the testimony of principals who have been in South Chicago for from fifteen to twenty years, that children of all the nations, with foreign tongue and strange manners and customs when they enter, go out from the eighth grade or the high school, the peers of their American associates in language and manners; essentially Americanized; even looking with contempt on their parentage and mother tongue.

"This is the secret of our ability to assimilate great foreign populations with safety." (J. M. Gillette, *Culture Agencies in South Chicago*, p. 47.)

There are several non-democratic features in our educational system. The aim here is to point out the more important ones.

First, retention of the traditional element prevents the adjustment of education to community interests and individual needs. Our ideals and matter are largely traditional. We carry a lot of effete matter in the subjects taught in our schools, as will be shown in Part III. Our supposition has been that there is just one training, one culture or discipline, to be given to all. This has been imposed on all communities and all individuals alike. We have tried to fashion all according to one pattern. Evolution comes by introducing variation. We have tried to make all alike. If society becomes more and more specialized, and if education is to fit for society, our supposition has been false. We can be democratic and can realize the needs of persons and society only by readjusting matter and method of education to actual needs.

Our educational system can be regarded as democratic only when and in so far as all lines of knowledge and training are placed on a basis of equality of rating; so that individuals and communities may be able to select that training which their interests seem to demand, without being blinded and prohibited by purely traditional estimates in favor of some end or subject. At present we are far from this ideal. We are intensely conservative all up and down the educational gamut. Second, in so far as the higher institutions make preparatory schools of the lower, they regulate the courses of the lower in their own interests and according to their preconceived opinions of education. It is coming to be widely felt by high schools that they have been sacrificed by universities and colleges. A true university would have a continuation course for every kind of training course of the next lower school. Its only business should consist in satisfying itself that the work of the lower school was worthy of credit. It should then admit to the appropriate course graduates from the accredited high school. The more liberal universities are coming to this position. Unfortunately, the majority are very conservative.

In like manner, the high schools are slow to recognize that anything but traditional elementary courses are admissible to secondary educational credit. Generally they would stand aghast at the thought of admitting pupils vocationally trained. Unquestionably they should be ready to receive those with a good vocational training, provided the tools of learning are in hand.

So long, however, as high schools can dictate the courses of the lower, and this dictation rests on a narrow, traditional and inelastic basis, our varied interests will not be able to

realize themselves through training in the elementary schools. Agricultural, mining, industrial, and commercial communities are prohibited from training their youth directly in their own community schools for their own community interests.

Third, in so far as the sexes have different functions in life by reason of sex differences, and yet are given identical training, our schools are undemocratic. This will find more extended treatment in a separate section.

Fourth, monarchical control of the schools on the part of the teachers, along with the examples it sets and the suppression it involves, is undemocratic. This also is treated later.

I. THE SIGNIFICANCE OF DEMOCRACY

If there were anything in democracy for the schools, educators should know it. The exposition of the principle or principles of democracy will show us whether or not our schools are doing all they should to instill its spirit and aims. Some attention must be given to finding the central ideal of democracy. The historical perspective will best reveal what its central idea is.

The present democratic movement. — We are witnessing a revival or a rebirth of democracy. Many are the indications of its regeneration. The term "democracy" is so often used that we might easily guess it serves as the tocsin of the age.

There is growing up a vast literature devoted to the discussion of the subject in its many phases. The books written on it are becoming numerous, and the space devoted to it in our periodical literature is enormous. Speeches in the political arena and legislative assemblies abound with

references to democracy and appeals in its behalf. Teachers in schools and colleges are expounding its principles and holding up its ideals to their students. Pastors and lecturers vie with them in its advocacy.

Certainly, in our own land, there never has been a time when the subject of democracy received so much attention on the part of the mass of people. At the time of the War for Independence some of the principles of democracy were clearly recognized by certain of the foremost leaders. But they thought of it as chiefly political in its nature, and most of the leaders then mistrusted the ability of the common people to participate in and conduct government. Our forefathers were bound by prevailing aristocratic views.

Our country has moved far along the road toward democracy since then. The states in the "West" filled up after the Revolution. The people settled there as equals because all could get independence in ownership of land. Hence the state constitutions recognized their equality and gave all adult males equal rights. This forced most of the Atlantic states to liberalize their constitutions in order to hold their people against migrating westward. While our national constitution has not changed, except relative to the negroes, our state and local governments have grown constantly more democratic.

The people have tested their power to conduct their affairs. They have succeeded and demonstrated their ability. They believe in themselves and believe that their safety lies in self-government. In the present period of great issues and grave abuses, the great leaders of the people are seeking to bring about a change in government, by which the masses may have still larger control of state

matters; and the people are responding. Democracy is thus receiving a fresh impetus.

It could be shown how many other nations are awaking in a similar manner to the call of democracy. The great nations of Europe, although most of them are monarchical in form, are democratic in fact, and are passing decade by decade further into the hands of the common people. Russia has had its revolution, and is slowly emerging into a constitutional rule. Turkey has just had its revolution, and is on a constitutional basis. Persia seems to be making the passage. China has a commission at work studying the governments of Europe and America, and instructed to draw up a constitution for that nation. New Zealand and South Australia have surpassed all the other states of the world in making the government serve the needs of the citizens. It would be difficult to find any convincing proof that this world-wide tendency to democratize governments is likely to be reversed.

Much which might be said in this part will be found in various portions of Part III. Especially what is said in that later connection on moralization and on the socialization of history expresses some of the most pressing and practical demands of the present time. Much of the matter included under those two topics might very well have been organized into a separate chapter under this present part, and designated, "Civic Demands."

The broader meaning of democracy. — A survey of history, from ancient to modern times, shows that the development of human society has been in the direction of more and more democracy. There may be several prominent historical ends. It depends on what we have in mind as to what

goal we actually see. Hegel saw history working out freedom; Paul found it in righteousness; Christ in the brotherhood of man. All these conceptions are more or less inclusive of one another. The other ends mentioned would not exclude democracy. In fact they all implicate it. On the other hand it involves them. I believe that complete righteousness, or freedom, or brotherhood would in all essentials mean complete democracy.

The broader significance of democracy may be seen by the enumeration of some of the gains in democracy. First, *politically*, the masses of people have grown steadily into larger control of governmental matters. Athenian democracy, democracy's highest form in ancient times, would stand in a poor light to-day, if compared with that of even such modern monarchical nations as Great Britain and Germany.

The Athenian democracy was a very limited affair. Only those of Greek descent could vote and hold office. A large portion of people were slaves, and of course not possessed of either civil or political rights. Moreover, foreigners who dwelt in Athens, and who chiefly composed the wealthy commercial class, could not vote, hold office, nor appear for themselves in court.

To-day only the semicivilized and reactionary nations withhold political rights. Everywhere there are tendencies at work for universalizing political and civil rights; whereas in ancient times, quite uniformly, people were slaves, absolute subjects, or possessed of but limited governmental power. The growing ideal in enlightened states to-day is that government is and ought to be the agency for obtaining exact justice between men, and that to be this the people must have complete control of it. Thus we see direct

legislation in the initiative, the referendum, and the right of recall, spreading widely, especially in the United States.

Second, democracy relating to *material goods* has increased. The evolution of society through slavery and serfdom is enough proof of this. That is, men themselves were once owned by others, or held as part of the estate. Men are now free. They may own property. All wage earners have property, in their wages at least, and can legally secure them.

Moreover, the masses of people participate in the enjoyment of more material goods than ever before. Average laborers are better housed, fed and clothed than the nobility of a few centuries ago. Just now, it is true, there is the menace of corporations and concentration of wealth; but even this menace has brought discussion and agitation which have cleared the air. A vision of a more equitable division of the social income is appearing as the result. No doubt the people intend to secure their rights to the product of their toil, which means a better democracy in material goods.

Third, there has been an extension of *knowledge* to larger and larger areas of humanity. Learning was once monopolized. Priests and scribes were depositories of learning. They were the real aristocracy of intellect. The masses of people were profoundly ignorant, and of course were preyed upon as a consequence. With the invention of the phonetic alphabet there was some extension of learning. With the invention of printing and the cheapening of printed matter the way was opened for a far wider extension. Later came public education, telegraph and news-gathering agencies, newspapers, libraries, etc. These are the agencies for universalizing knowledge.

Now education is becoming compulsory. There are few bars to literacy. Enlightenment is viewed as the foundation of democracy, political and economic. There are premonitions that the state may so extend compulsory education that the children of the indigent may be supported in order to assure their proper schooling.

The growth of democracy might be followed in other lines of social development, but these suggestions will be sufficient to illustrate the kernel of democracy. It might be said that complete democracy would be *the people's participation in all the essential satisfactions of life and their control of all fundamental social agencies by which those satisfactions are distributed*. In brief, democracy is the people's control of their own interests, and the making all social institutions meet their needs. Thus it is broader than the government, it extends to other phases of life than holding office, voting, and being sued in the courts. It is the principle of equalization of opportunity working in all important matters.

II. SPECIFIC REQUIREMENTS OF DEMOCRACY ON EDUCATION

With the thought above developed in mind, let us pass on to a consideration of some of the more important requisitions democracy necessarily makes on education.

Essentials of knowledge, physical environment.—There are some items which must be regarded as fundamental to a progressive, healthy life to-day. One phase of this knowledge deals with physical nature, and the other with social matters. Both constitute man's total environment.

All his adjustments must be made in these two directions. All his problems meet him there. Certainly only the general and essential principles of these two great realms could be crowded into childhood. Even to contemplate this raises such a vast problem that many might be skeptical about its accomplishment. Another necessary line of information is a knowledge of the self which must adjust itself to those environments. The more extended notice of this item will occur in Chapter XII.

Society has accumulated a vast fund of achievement, during the course of its existence, which it holds in its storehouses as an inheritance from the past. It belongs to no individual nor set of individuals as an estate, but to society as a whole, because no individual nor set of individuals has created the achievements, much less have they conserved them. Therefore this treasure, far more precious than the traditional Nibelungen treasure, belongs to all and is for all; and the fate of all, and of society itself, is dependent on its disposal.

Lester F. Ward, in his application of sociology to education, makes social progress depend on the universalization of the achievements of the world. All other problems in their ultimate solution are dependent on this universalization; for men can act independently, that is, rationally, on any given matter, only when they understand it in its conditions. If men knew enough about economics, politics, etc., they would soon be masters of the situation in their ranges of life. Sets and cliques and special interests could not juggle them out of their just deserts.

In his *Applied Sociology* he establishes the fact that there are many more geniuses and talented than ever

come to light; that these can mature and have matured only as they are brought in contact with the rich heritage of the past; that social progress depends on their discovery; and therefore that it is the business of education to bring the essentials, the principles of this practical world-knowledge, to the doors of every one.

I agree with him in this fundamental position. To me the problem then becomes one as to the method of realization. To attain it, we should need to revise our standards of education vastly. I think we should have to extend compulsory education to cover secondary schooling, at least. I think this should be our ideal to work up to. We spend about a billion dollars a year for national government expenses, two thirds of which is for military matters present and past. Yet we claim to be a great civilized and peaceful nation. Dare anyone face these facts and say we are too poor to give every child a high-school education? I believe, then, that we should advance our standards of education to that degree as rapidly as possible.

As to the *physical range* of knowledge, we must readily admit that every one needs the chief ideas of nature. The striking difference between the ideas of savages and the enlightened members of humanity, now, is sufficient to demonstrate this. The savage knew nothing about the properties of objects, in the sense that they made up the very nature of objects. Whatever qualities they perceived in things belonged to the spirits which moved through them. Certain plants poisoned animals and men, not because poison was an inherent essential attribute, but because those plants were good instruments for the spirits to use to penalize the victims. Some plants were curative in diseases, but

not of themselves; only because the spirits chose to work through them.

So, not understanding the properties of objects, they could not conceive of nature, of a world, of a universe which existed because of the properties and relations of all objects. Hence, primitive men were the prey of superstition, and were haunted by unnumbered and unbounded terrors. Some conception of the concatenation of things, of their interdependence and coöperation in the production of phenomena, of the reign of law in nature, and of the dominance of cause and effect throughout, is necessary to prevent superstition and to give the outlook which is so essential to the grasping of modern scientific thought.

When we consider the more directly and immediately useful, the principles of natural science are found to be necessary to the various great fields of achievement. Those of chemistry are at the bottom of steel manufacture, of sugar and oil refining, of knowledge of soils, of foods, etc. Those of biology are the basis of plant and animal culture in all of their many forms, of medicine, hygiene, health, and so on. Physics enters into the construction of all machinery, of architecture and bridge building, of civil engineering undertakings, and many of the phases of agriculture, manufacture, and commerce.

We can hardly conceive that anyone could be much above the unskilled class of labor, or, as a skilled worker, be pliable and constructive in his occupation, without having a good grasp of at least the principles of the science or sciences which underlie his special line of work. And the more of the principles of all the sciences he has obtained, other things being equal, the more progressive and efficient he will be.

The essentials of knowledge, social environment. —

There cannot be too much insistence on the proposition that our general social safety depends on establishing and maintaining a high level of intelligence about social matters. Some have taught that democracy depends on complete equality; others that it hangs on equality of opportunity; others that it must come by equalizing opportunity in the shape of information. I believe it is now possible to realize the equalization of certain social knowledge which is essential to realizing and preserving democracy in the state. The universalization of political and economic knowledge involved in our present issues and problems I am sure should obtain for the following reasons.

In every age the rights of man are imperiled, whatever rights have been worked out up to that time for the masses of men. Each age presents perils in new forms. It is incumbent on the people at the time to obtain information of the conditions which surround them, to understand the tendencies which manifest themselves, if they are to discover the nature of the impending dangers. Suppose it is a matter of corporations. Railroads, for example, consolidate; eliminate competition; regulate rates at will. All producers and consumers use the roads. The rates are in nature a tax on their goods. In so far as roads are absolute, they might ultimately take away the property of all patrons as rate tribute. Unless people are generally intelligent on railroad matters they will not be able to protect themselves. It is conceivable that one gigantic railway trust might form, which should not only dispossess the masses of their property, but reduce them to a form of serfdom. (See Ghent, *Benevolent Feudalism*; and London's

Iron Heel.) So economic equality would perish from the earth.

Likewise people must be informed on matters of government to preserve their political democracy. Thus, some time ago, they awoke to the fact that the nomination system placed government in the hands of bosses. Before they awoke they had been long misgoverned; with due information they moved for reform. The primary nomination system which is coming into use is the result. Now we are discovering that the United States Senate, the congressional committee system, our judicial system, and so on, need reforming. The abuses have existed before the discovery. In so far our political rights were withheld. Justice waits on adequate knowledge. Thomas Jefferson was well advised in asserting that democracy in the state could not be maintained with popular ignorance.

One task of education is to put the essentials of political and economic knowledge before the citizens of the future if they are to be capable of sustaining their political and economic progress.

Significance and importance of moralization. — Moralization is that phase of socialization which brings the individual into conformity with the ethical ideals and needs of his society. We can conceive that a man might be cosmopolitan in knowledge, and yet use his vast information to promote his mere individual interests, so sacrificing the interests of others. Indeed, such individuals are not rare. If information is necessary to make the individual master of the situation for life- and work-purposes, ethical quality is just as essential to keep him from usurping the rights of other persons who are involved in the same situation.

The importance of giving this element a place in the programme of training is generally conceded. The reasons may be briefly stated. First, many believe that character is the dominant end of education and that life is chiefly a school in which moral will is developed. Consequently society and all else exist for the sake of moral achievement. There could be no doubt that those who support this view would give moralization a large place in the schools.

Second, there is a side to social evolution which emphasizes the ethical, or certain ethical relations as the goal. Historically viewed, as we have seen, progress has consisted in realizing a larger democracy. The great struggles have been for personal rights and equal opportunities. Progress may be measured in terms of material goods and the latter may condition rights and opportunities; but the end of development is the greatest satisfaction, of all sorts, for the mass of humanity. In line with this view a part of the work of education should be to further the work of humanity by giving a perception of and enthusiasm for these ideals of progress.

Third, society depends on moralized people for its conservation and protection. Immorality is anti-social and therefore destructive of that medium which is necessary to carry on the interests and life of the many. It is a matter of indifference here, whether character is viewed as an end in itself, or as a means to the preservation of society, chiefly. In either case, society depends on it for its continuity.

These considerations are particularly pertinent now. Insurance graft, railroad speculation, bank wrecking, monopoly building by rebating, etc., are terrible object

lessons of the need of that morality which is built on a reverence for the rights of man, or the regard for the social welfare.

Social rather than individualistic moralization needed. — The science of ethics is being socialized. It is coming to be seen that the content of the imperative should be made up out of social relations and processes. The inner voice, in the nature of its promptings, may be right, but it needs rectification in the light of the actual situation. Riotous individualism comes out of a lack of moral disciplining of this sort, and finds its license in partial and formal ethical codes. A reconciling and authoritative ethical ideal has been lacking.

Teaching is needed which gives the habit of looking at individual conduct, not as a realization of stationary types of either individuals or society, but as related to a progressing community. "Whether we are aware of it or not, whether we approve of it or not, the human race is visibly gravitating toward application of the criterion which the process-conception of life indicates." (Small, *General Sociology*, p. 674.) "All the systems of ethics and all the codes of morals have been men's groping toward ability to express this basic judgment: That is good for me, or for the world around me, which promotes the on-going of the social process. That is bad for me, or for the world around me, which retards the on-going of the social process." (Same, p. 676.) "Our judgment of conduct in association always tends to appraisal of it as good or bad according to its assumed effects upon the largest range of associations that we can take into account." (Same, p. 682.)

Baldwin demonstrates, in tracing the genesis of the child's

social and ethical personality, that his ethical judgments and ideals arise out of his adjustments to the social processes of larger and larger groups which he comes to live in. (*Social and Ethical Interpretation*, Chap. I.)

The social view bases good conduct, right, duty, not on a fiat, a decree, a maxim externally imposed, but on the relation of the act to the thought of progress; that is, to its furthering or injuring the interests of those bound up with the actor in an interdependent group. Therefore a good man is one who does not injure the interests of others in his society but advances them by his transactions. His ideal arises out of his ideal of the well-being of the masses; and his action is weighed as to its effect on the largest social situation he can conceive. We may regard self-government and coöperation also as important phases of moralization.

Moralization — training for self-government and co-operation. — Attention has been called to the long and broad movement of human society toward the realization of the larger welfare of an increasing proportion of the population. The conduct of *government* has passed over from the hands of the one or the few to that of the many. The undertaking of the many to regulate and carry on their affairs through government grows ever more elaborate. The consequence of this developing control of society, organized as the state, is that the masses assume greater responsibility. We have seen that the protection of their interests demands that the people must have a larger social intelligence. But they must have a training also in the exercise of their judgment about the decision of matters and the administration of affairs. The schools can give

a larger and closer knowledge about business and politics. They should also contribute to exercising the duties and responsibilities of government.

A recognition of the great work the public schools have wrought need not blind us to the defects in the system. It might logically be inferred that a democratic people living under a republican government would not permit monarchy, even in form, to show itself in those institutions which are nearest to them and from which they should expect to come the greatest stimulus toward more liberal government. Yet it is true that in the average class room the teacher is wholly the legislator, judge, and administrator. There is little perception on her part that if the pupils are to become citizens in a democracy where self-control and self-direction are foundation elements, such citizenship cannot be produced by subordinating them to one will during one half of their minority; by securing order through passive obedience; and by altogether withholding from them the burdens and responsibilities of their own government. Over the whole land there has been little attempt made so to order the school, so to lead, help, and inspire it as to enable the pupils to participate in their own control.

Quite as important as self-government is the ability to *coöperate*. The growth of society has been a growth of coöperation of a certain kind. Primitive men early discovered the value of working together. Several men could overcome a large animal, thus protecting themselves or gaining an abundance of food, whereas one man would be powerless. A combination of strength would lift greater burdens, draw heavier loads, accomplish more work, than that of single individuals. On this principle, larger groups

of people could dwell together, armies could be put into the field, finally cities and states could be maintained.

In modern times all great undertakings rest on the coöperative ability of multitudes of men. Intelligence to comprehend common plans and to carry them out is involved. Untrained savages could not take the place of civilized men here. Every train which carries passengers depends on the coöperative ability of engineer, brakeman, fireman, conductor, station agents, switchmen, train dispatcher, as well as on many others indirectly. Should one fail to do his duty, many deaths and injuries would likely result. The very existence, as well as the further advancement, of society is being determined by this kind of talent.

But in a new and special sense, wrapped up with growing democracy in human affairs, is the need of placing emphasis on coöperative training. Democracy means coöperation of a very high order. Self-government means the power to create and judge the worth of plans and laws of human action, in addition to the qualification to carry out the orders of an overlord or master. The development of the government of the people, by the people, and for the people can but partly come to be a fact so long as the great mass of people can only blindly follow plans and laws made by the few.

Democracy in *business* is a growing fact and is furnishing a motive for better preparation. In the sphere of business undertakings there has taken place a vast evolution into out-and-out coöperative enterprises. In the United States multitudes of coöperative stores, creameries and dairies, elevators, industrial establishments, and insurance institutions exist. Many are brought into existence each month.

Not all succeed, to be sure, but the fact that the volume grows testifies to the profundity of the movement in that direction. Coöperative distribution in England does a business each year of something like \$500,000,000. The value of coöperative business in Germany and other European countries is immense and steadily increasing.

State enterprise also is entering the field of business; and the success of such undertakings is dependent on the intelligence and talent of the citizens for conducting coöperative enterprises. Various nations and states own and conduct railroads, telegraphs, postal systems, banking systems, forestry domains, and so on. Municipalities own and manage waterworks, lighting plants, street railways, parks, libraries, schools, etc. The profits and advantages of these state undertakings are distributed to all the citizens, and advance the good of all. The coöperative spirit is needed to conduct the businesses already taken up, and those which will doubtless yet accrue.

Coöperation demands intelligent insight into the nature of the enterprise and the complexities of its working; a sympathy with the purpose, which is to distribute the advantages and profits to those contributing their efforts as equitably as human wisdom can devise; and a discipline and self-restraint which enables those who give their strength and talent to the maintenance of the undertaking to sacrifice the present for the larger good of the future. A love of mankind, of justice, of the common good, in fact, altruism of the highest type is required for successful coöperative effort.

Right of vocational training. — Every individual should have the right to qualify himself to make his way in organ-

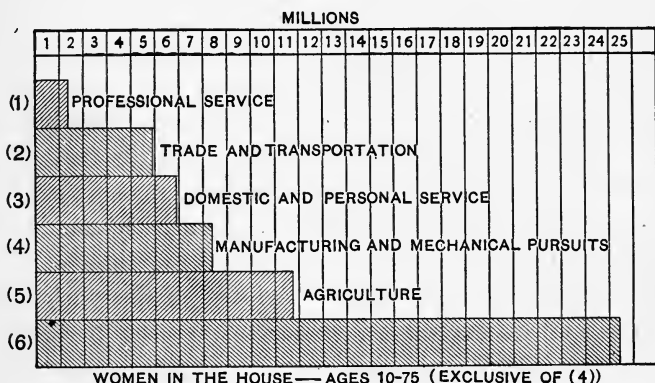
ized society, to profit by its achievements, and to render it service according to the prescriptions of society itself and of his own nature. In full view of the facts of pauperism, poverty, and crime which abound and which sociologists have to consider, and also of the necessary importance of the industrial and commercial factors in modern society, I have no hesitancy in declaring that the first and foremost duty of society, through the agency of the schools, is to make every boy and girl fit to make a living by means of some special knowledge or skill which society has need of. This is called the "bread-and-butter" view of education by its enemies. They claim to think the adherents of this view see nothing ahead but the question of bread and butter. But no one would more insist than its exponents that other things should be considered as given in and along with a bread-and-butter training, such as information, moralization, appreciation, etc.

I shall seek to show, in other chapters in this part, how fundamental the economic is in society, and, hence, for the life of the average man; and how the facts of crime and pauperism should lead us to a more practical training. And I have already tried to demonstrate that growing specialization in society demands a corresponding specialization in the equipment of its members. All I shall do here is to accentuate the nature and force of these overwhelming demands society is making.

We have no right to say "criminal," "pauper," "tramp," until we know whether or not the training system which society puts the child through has been competent to equip him for life. Before condemning individuals we should consider if they are not products and victims of a system.

If the system he works in is against him, if it does not give him an adequate equipment, it is withholding some of his fundamental rights; especially in view of the fact that it holds him responsible for his failures and deficiencies.

Democracy in education insists that every valid interest in human society shall be recognized in the school system. The accompanying cartogram reveals the various occupational groups in the United States, as given by the census of



Vocational Groups in the United States.

1900, with the number of persons following each group line. The lower group is not given in the census report as one of the vocational groups, but I have added it, after estimating the number so engaged from census figures.

An inspection of the cartogram, with the thought of special training in mind, impresses upon us the fact that the top group, the smallest in number of all, is the only one for which society, acting collectively, self-consciously, and deliberately, has made provisions at all; or in any degree commensurate

with the dignity and demands of the service the group performs for society.

We had about 30,000,000 workers as given by the census of 1900; one third were agriculturists, and we have permitted hardly a smell of the farm to get into the rural schools. There are over 7,000,000 manufacturing and mechanical workers, and we have given them hardly any recognition. We may say that nearly all of our workers have to depend on some form of the apprenticeship system to fit themselves for their social service.

It is a matter of astonishment that society can get on at all, leaving these fundamental occupations to be recruited and enterprised in such an unscientific and slipshod manner. The case will not be satisfied until agricultural, industrial, commercial, and domestic workers (including mothers and girls in the homes in this latter class) have recognition in the educational system of the nation in the measure of their importance, and are given a preparation for the life society assigns them in itself which is commensurate with the importance and place of their calling.

About the women in the homes, the 25,000,000 females between the ages of 10 and 75, something will be said in the next section.

Training for women. — There is a portion of the community, which, in its psychological constitution, and in its economic division of labor, differs profoundly from the other portion. This part of the population is the female sex. A study of sex-psychology indicates a difference, in certain respects, between the psychical natures of men and women. Woman's nature and constitution are woman's and not man's. She has interests, in fact her dominant interests, which are

not those of man, and which rest back upon her physiological structure and function. Maternal instincts and interests arise out of sex physical equipment, and never can be destroyed, however much they may be perverted and outraged.

In the economic division of labor which society imposes on the home institution there is the same discrimination between sex. The work and duties of man and woman in sustaining the home do not lie in the same direction and are dissimilar in form. Woman's work for the home is home-keeping, food-preparation, and child-culture. Man's fundamental work is beyond the walls of the home in procuring its adequate support. In so far as homes are necessary to their supporters and to society, these offices cannot be exchanged or disregarded. Unless social evolution proceeds far more rapidly than there is present indication of its doing, so that the present home as an institution is supplanted by some other which will set woman free from specialized domestic demands, we must expect that the majority of women in future will become wives and mothers, whose dominant privilege and duty it will be to perform or superintend the business of home-making and home-keeping.

With the cartogram presented on page 96 before us, let us ask ourselves the question, "What are the public schools of America doing of a practical nature for those more than 25,000,000 home-makers and home-keepers to qualify them for their work?" This is a question we must face and for which we must begin to find some adequate answer. It is fundamental to national life.

National economy is dispensed in the home more than in any other quarter. The home-keepers are the spenders of family incomes. They are the purchasers of foods, clothing,

furnishings. On their judgment and administration of finance household economy and happiness depend.

If the wife does not know food values, worth of cloth, furniture, etc., if she is ignorant of accounts, and of the social laws of supply and demand, she is likely to be wasteful and extravagant. It is too much to ask of our women that they shall be wise economists and administrators, when their only training is that handed down by tradition through the homes. There is great work here for the teacher of economics and chemistry in giving practical lessons in the social and chemical values of consumptive goods.

But family health, as well as economy, depends on the administration of affairs in the home. When it is remembered that the health of the family, the amount of energy, and the quality of mental effort its members have to expend, and the disposition and temper with which they meet the world, and which make up the enjoyment and contentment of life, depend on the selection, preparation, and preservation of foods, and on the sanitation of the home, and that these things are in the hands of women, the importance of domestic economy may begin to be seen.

And there is child culture and nurture which are even more important. What a place child study in its large and practical bearing should have in the schools; and all that is given is a little physiology, hygiene, and perhaps formal psychology in a few schools. The physical ability of our citizenship is established in early years. The care of the body, the choice of foods, the clothing, the little ailments, often decidedly vital, are made important because they condition life and mind.

When we remember that one third of all deaths occur in

the first years of life, as many as in the next nineteen years, and that all the early years are perilous by reason of diseases; and that the large number of infant deaths occur because of the ignorance of the parents, as is seen from the fact that the more ignorant populations sustain the greater disease and death-rate; the significance of knowledge in the physical phases of child culture is apparent.

But the mind, disposition, and character, in their establishment, are even more important. Few women understand child psychology save in a superficial sense. The order and periods of mental growth, the demands of the mental nature in the various periods, the appropriate treatment and control to exercise in each period are commonly unperceived and ignored. We do not give half enough attention in schools to the science of calf culture, to be sure. We give none to child culture, in the way of making wise and responsible mothers.

Child raising, like cooking and home-keeping in general, is about what it was generations ago. Yet child psychology and domestic economy are to-day actual sciences. And yet, too, we give our women, our mothers and home-keepers, no training in either. What enlightened and progressive people we educators really are! Our chief credential is the stamp of antiquity and tradition. We make our environment an obstacle, rather than an aid, to fitting for life.

Vocational education and the talented. — The objection has actually been made, against this democracy of training, that it does not provide for the genius or the person of talent; that education should be so general that it will fit any sort of genius or talented child for higher reaches.

In making reply to this objection it is first necessary to call

to mind the nature of genius and talent. Let us use the word talent for brevity. I believe psychologists and sociologists are settling down to the idea that talent is more likely to be the outcome of balanced judgment and persistent will, working or concentrating in some given direction, than an idiosyncrasy of birth so that by natural abnormality or oneness the individual is fit to do but one thing.

Galton's idea, in his *Hereditary Genius*, is that genius surmounts all obstacles, that it is bound to find a way. If that were so one course of study would do quite as well as another, because, notwithstanding the course being against his idiosyncrasy, the person would surmount and go on to glory. So, a vocational course, such as we propose in this work, would be a mere bagatelle, as a matter of obstacle. And if talent were simply a larger higher level of mind-power, judgment, and determination, as most students of talent now hold, and our vocational course were in the way, it would be so small an obstacle, in Galton's view, as to be unworthy of mention.

But Odin and Ward, in their more recent and more thoroughly scientific attempts to discover what the factors are which produce talent, reject the idea that talent shows itself in spite of all obstacles. In fact, they demonstrate that talent is dependent on environmental factors for its fertilization and revelation to the world. I have given the results under the section, "Society as opportunity" (p. 59), and refer the reader to that passage. "The woods are full" of potential geniuses, one for about every 300 persons, according to Ward's findings. Our final conception of talent, then, must be that it is the normal mind raised to a greater power, and concentrating in some given direction;

and that it is dependent on the existence of cultural factors in the environment for bringing it out as does average mind.

A second consideration would be the nature of the course of study itself, as to whether or not it would be obstructive; if it were true that talent could be obstructed. In connection with this topic I invite the reader to consider Chapter II, which deals with the school programme, to see if the broad groundwork in the informational, moralization, and appreciation elements is not a guarantee of a comparatively full cultural process; about as full, with the additional advantage of being organized and directed on principle so as to be more than ordinarily effective, as the level of work would afford; also to look over the proposed programmes in the last chapter of this volume (pp. 289-296) with the same purpose.

In my estimation, a well-organized agricultural community course, for example, not only does not offer obstacles to the individual who desires to go to the educational top, but actually affords advantages in the way of a better and richer selection of cultural material; and a better organization principle, and consequent organization, than our present common course. The better cultural matter consists in subjects and matter which are more pertinent to the age and larger community life. Organization, of course, is the very soul of meaning. Chaos and lack of articulation are real obstacles. Education directed towards a well-defined end, and organized according to principle, is, in the highest measure, fitted to bestow meaning, significance, the soul of efficiency.

But Ward shows that it is the utter lack of any sort of cultural element that is the obstacle to the discovery and the maturing of talent. Given any sort of an outlet, any

approximation of or connection with the great reservoir of the world's achievements, which constitute culture, and talent finds its way into the currents of the world's history, matures, becomes fruitful. And certainly vocational courses of all sorts afford such connections and outlets.

CHAPTER VI. IMPORTANCE OF THE ECONOMIC INTEREST IN SOCIETY AND ITS SIGNIFI- CANCE FOR EDUCATION

I. GENERAL SOCIOLOGICAL SIGNIFICANCE

IN Chapter IV it was shown that economic activities constitute one of the great lines of achievement of organized society. Something of the place and meaning of this line of interests was indicated. Some attention was paid to the importance of the economic, relative to other social structures, and the consequent significance for the end of education.

In this chapter we want to expand this last thought. The attempt will be made to show that the economic interests are the dominant ones to-day, and that the tendencies at work will make those interests still more powerful relative to others. This is developed as a basis for the conclusion that the economic should have large recognition in the educational system.

Economics deals with wealth. We usually think of only material goods as wealth. But economists assert that anything is wealth which can be bought and sold. Hence not only material articles but services of men may be considered in economics. Anything that can be produced or consumed and put on the market is therefore included.

I shall exceed this meaning somewhat in this chapter, particularly in the last section, but for convenience I shall

put even the matter of increasing the satisfaction of life under the caption of the economic.

It determines motives. — The economic of course has always been a determining influence in society, whether men recognized it or not. It has been the power by which changes in human affairs have been consciously or unconsciously determined. Every student of history knows that transformations in society come about by reason of the inherent automatic, unreflecting forces, more than by reason of the highly conscious coöperative effort of communities. Men shape their affairs, oftentimes, under the sway of factors whose real determining effect on their own minds, as they seek to decide matters, they do not perceive.

The well-known case of the "ministerial call" might be taken to illustrate this. It so happens that duty oftenest lies, or seems, to those deciding, to lie in the direction of the larger church and salary. We have to grant that ministers conscientiously weigh their calls. The fact that the outcome is as it is, merely indicates that the factors of larger salary and charge are really the determining factors in the recognition of a call to duty. So in matters of history, whatever motives and reasons men have assigned for transformations, careful consideration exhibits economic forces as at least largely producing the changes.

Economic changes determinative of other social changes. — Society has, as its foundation, the satisfaction of physical wants. All other wants are built up on this and cannot be satisfied until these so-called lower wants are met. Moreover, the higher employ material things with which to appease their hunger.

The amount of population a region has depends on the

resources of the section. The locality must either directly supply necessary subsistence, or else must furnish resources of another kind which may be bartered for means of life. Thus England does not produce all the food it needs, but its mines and position are the basis of manufacture and commerce, by which the necessities of life are gained.

The quality of a population is determined by the character of its economic activities. Industrial, mining, commercial, agricultural communities have aims, spirit, traits peculiar to themselves. The character and demands of the people depend on their vocational organization. Civilization awaits economic development. Spain has made more progress in the short time since her people began to be moved by industrialism than during several times the period in previous times.

Government is very largely the agent and register of business. The organized state, politically, stands for certain and secure interchange of goods. An unjust government favors economic exploitation of the people by the favored few. A just government seeks to secure equality in the distribution of wealth. Legislation is the outcome of struggling economic forces. Laws register the wishes of the factor in political power with reference to wealth regulation.

What, in history, is called the "industrial revolution" may be taken as an illustration of how changes in economic conditions bring changes in other phases of society. It is only a larger and more striking case of what is constantly occurring. Perhaps no other event in history has made such vast changes in the trend and structure of society as has the introduction of the factory system and in general

the machine age. Wherever it has been established, it has overthrown the old order and has put into operation forces and tendencies which keep on working unforeseen results.

This "revolution" began with the invention of a few simple devices a hundred and forty years ago. Since then industrial evolution has expanded and intensified the spirit and method then established. All around and everywhere the world of science, discovery, invention, and business is intensively and extensively developing the economic. We are bound to expect that in future there will be more of it rather than less of it.

The industrial revolution made a new order of things. It changed men's social and economic relations. It accentuated industry as never before. It gave birth to transporting and communicating agencies that easily and quickly bound all nations together; and all parts of the earth were laid under tribute by a real world-commerce. It gave basis for enterprises which have grown world-wide and as powerful as states. It gave birth also to labor organizations as large and powerful as the opposing combinations of capital. Everything to-day converges toward, radiates from, is based upon, and is dominated by these changed economic conditions.

Every calling rests on an economic basis. — Another consideration shows that the basis of every calling is economic. Even if we should take the theological conception involved in the Westminster catechism, we should find this to be true. It asks the question, "What is the chief end of man?" The answer is given, "Man's chief end is to glorify God and to enjoy him forever." With this high end of life in view, still the basis of realizing it in an active,

full, fruitful life, is a measure of wealth and leisure for self-improvement and for helpful service for others. Thus, ministers, lawyers, artists, physicians, teachers, officers have to "work for a living," whatever else they may work for; and their living depends on their value to society which is rated in wages, fees, or salary.

Mr. Ward demonstrates that wealth has been the foundation of success among French-speaking people from 1100 to 1825. Thousands of talented men and women within those centuries are studied. It is found that until approximately the 19th century is reached, the wealthy classes, particularly the nobility, furnish about all men of talent. This is not because potential talent is confined to that class, but because the rest of mankind had to work so incessantly to make a living that they had no time or opportunity for culture.

The same is held by sociologists to be true of all races and people until relatively recently. In Greece it was the leisure class, and that means the wealthy class, who owned slaves to make their living, which furnished the artists, the men of literature, the philosophers, and the statesmen. In Rome the same was largely true, although the situation was qualified by the fact that Rome made slaves of many of the cultured Grecians who made intellectual contributions in that nation.

Since the beginning of the 19th century, leisure or the opportunity to study, to improve oneself, and to become intellectually productive has become more widely distributed; and hence all the social classes are contributing to human achievement. This has come about because hours of labor have been shortened, the relative wages of the workers have increased; and free public education brings

the tools of learning to all, so that an able worker may improve himself.

It is his power to make his living and to garner some leisure time which is the foundation of his literary, artistic, scientific, inventive, or other kind of productive work. And the more efficient he is in his calling, the better his training and skill, the greater will be his emolument and his power to command the time and circumstances necessary for the prosecution of his "higher" aim. This holds, as well, of those who desire to carry on benevolent and altruistic work of any sort. Such persons must be economically independent, must be wealthy so that they may undertake the desired activity or must earn enough in some way to give themselves the time and the means to execute their plans.

II. IMPORTANCE AND INTENSIFICATION OF PRODUCTION

Importance. — Production consumes most of the social energy. — Production is the chief phase of economics. At least, it gets the most attention in the texts. It covers all the processes of wealth, from the time an article begins to be made until it gets to the consumers or users. Goods are really not completely produced till the users get them. So the transfer, the transportation, and the marketing of goods are included in production; as well as the making or growing or mining of them.

This work of production of goods and services consumes most of the energy or force of human society. Society, like the human body, has just so much energy to spend in the way of effort. A man has so much power to spend in each of his tasks during a day or a year. Thus a farmer plows ten hours a day, chores two, prays a few minutes, and eats

an hour or two. He finds about this proportion of time is the most economical and necessary. Most of his energy goes to production.

We may view society as a big organism, having just so much energy at its disposal, and so many tasks to perform. Like the farmer the most of its force goes to creating things to use. This distribution of its time and effort among its various tasks it finds necessary and the most economical.

This actual fact of distribution may be seen from the following data. The occupation groups show us in what way the social energy is spent.

OCCUPATIONAL GROUPS IN THE UNITED STATES, 1900

Occupational Groups.	Number.
Agricultural pursuits.....	10,438,219
Professional service.....	1,264,737
Domestic and personal service.....	5,691,746
Trade and transportation	4,778,233
Manufacturing and mechanical pursuits.....	<u>7,112,987</u>
Total.....	29,285,922

Of all these workers we are surprised to find how few, comparatively, are engaged in cultural and spiritual social services. This further analysis indicates this:

Actors.....	34,923
Artists and teachers of art.....	24,902
Authors and scientists.....	6,058
Clergymen.....	111,942
Journalists	30,098
Musicians and teachers of music.....	92,264
Physicians and surgeons.....	140,415
Teachers and professors in college.....	446,797
Officers, local, state, national	<u>90,290</u>
Total.....	977,689

If we do not number among the workers the females from ten to seventy-five years of age who are at home, those we

have grouped as cultural workers equal about one thirtieth of all workers. If we include the former, the latter drops to a ratio of about one fifty-fifth.

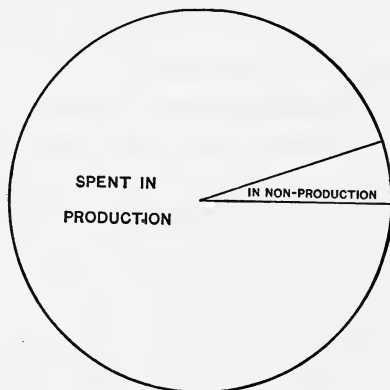
The total number of those who render "service," as distinct from the workers who are directly engaged in the production of material things, is found in the sum of the second and third groups of the first of the above tables, a total of 6,956,483 persons.

There is little reason, however, to make the above qualification. Most of the workers are performing services on which those directly engaged in material production depend, and without which many would not be able to be material producers. Actors and musicians inspire and rejuvenate tired workers, so that they are able to keep to their work. Preachers, authors, and journalists give the stamina and character which enable them to bear heavier strains and responsibilities. Physicians keep them well or restore them to working strength. Teachers and professors train the intelligence which makes possible the great complex undertakings of modern society. Those engaged in most of the domestic and personal service activities perform functions which the worker might have to assume otherwise, and are thus contributors. Officials carry out government, so necessary to providing services and preserving that social order on which all productive enterprises depend.

We should likewise take account of the 25,000,000 females who do the home-keeping for all the workers engaged in the more obvious and public work of the world. Food, refreshment, rest, the inspiration and strength which come from sympathy and affection, consolation, encouragement, all these things which are such vital factors in keeping up the

working machinery of humanity, are some of the services which these unrecognized aids to production contribute.

We perhaps should say that 95 per cent, probably more, of the social energy is used up in productive work. That means it is vocational. Making a circle to represent the total social energy, the consumption of the latter would appear as in the accompanying diagram:



Intensification, the motive of the age.—Having seen something of the importance of economic production in society at large, let us turn to view its intensification. Evidently an activity which consumes some 95 per cent of the energy at the disposal of collective man is important enough to demand special training of our schools. If we can further show that economic activities are becoming intensified, that they are receiving more rather than less stress, that they are making greater demands on the workers in the way of specialization and skill, the lesson for education is obvious. If an investigator or visitor from an outside world should visit the earth to-day, and should seek to find what is the

prevalent motive of the age, he could hardly escape the conclusion that the dominant spirit of occidental civilization, at least, is industrial and hence commercial. It is true that not all western nations are equally well equipped or advanced to respond to this ideal; but it is equally true that even the most backward are feeling the impulse and stirring with life to move into industrialism.

Whatever form the spirit of civilization may have taken in the past, it now garbs itself as commercial expansion and dominance. If to-day a nation colonizes, or if the nations seek to partition China among themselves, it is in order that in the colonies or in the "sphere of influence" falling to each, they shall be dominant in trade; or if a nation stands for the "open door," it is that she desires to gain equally free access, at least, for her commerce with the other nations. Whereas, formerly, inferior people were exploited by repression, restriction, and outright robbery on the part of superiors, now they are cultured, cultivated, encouraged, peradventure, in order that the greater productive output may flow into the commercial channels of the dominant superior.

Most of this is good. It builds up the waste places of the earth, civilizes and enriches all peoples, makes for world peace, and rapidly draws together, by various international bonds, all the parts of the world into a compact interdependent federation. (Reinsch, *Colonial Government*, Chap. I.)

In 1905 Baron Kaneko of Japan, special plenipotentiary to this nation to secure an economic and commercial alliance between Japan and America, after the peace treaty had been signed at Portsmouth between Japan and Russia,

said in an interview: "Japan and the United States will be strong friends. Wars are fought for commerce, peace is made for commerce. A commercial alliance is the strongest of all alliances." (*Chicago Record-Herald*, Sept. 11, 1905.)

Pressure of population on resources. — The subsistence of the human family depends on two things — the total amount of arable land, and the intensiveness of cultivation. The population of the earth has pushed ahead, until within the older nations extra land is no longer available; and between the nations there is severe competition to secure and to exploit the less occupied lands. Intensive cultivation in the older regions has been crowded severely. It offers large increase, yet cannot be indefinitely elastic and expansive. The law of diminishing returns holds ultimately.

There is decreasing natural wealth. For instance, the forests of the world are receding rapidly. We are engaged in cutting timber at the rate of 25,000 acres per day, or 40,000,000,000 feet board measure per year. In three years following 1900, the wood worked up into paper pulp increased almost 300 per cent. And it takes thirty years for a spruce tree to grow to serve as paper pulp.

Timber for railroad use has become so scarce as to make a problem for railways. One great system is in course of putting out hundreds of thousands of acres of young trees, with a view to raising its future supply. The forests of the northern states being practically exhausted, the mills are removing, and locating in the forests of the southern states. The Bureau of Forestry predicts the end of our forest supply in 20 years, unless we conserve the forests.

We now take from the Lake Superior region 24,000,000 tons of the best iron ore per year. Formerly ore with less

than sixty per cent of iron was thrown away, now with less than forty-eight. Much the same may be affirmed of the precious metals. It is true that new deposits of gold have been found in Alaska and in Africa in recent years, so as greatly to increase the supply relative to silver. But that there is need of economy in mining is shown by the fact that the material from the mines once worked over is now being worked over again by improved processes to extract the remaining metal. Recent estimates state that our iron supply will be exhausted in from 50 to 100 years.

Even in respect to land, which has been so free and plentiful in the United States hitherto, we are in sight of the time when all will be occupied. Free land in the West to be had almost for the taking has been the explanation of high wages and prosperity. Now, as we begin to feel its scarcity, we see appearing the old world problems, which arise from crowding population on means of subsistence.

Evolution of new nations into industrial order. — Another large reason for this economic dominance is that, beside the pushing of the population on land and food supply, the various parts of the civilized world have been put in close dependence on each other, made economically an organic unity, by reason of quick transportation and communicating agencies. It is impossible for a nation to remain localized and provincial, independent economically, and remain civilized. Let commerce into a nation inferior in point of civilization, as in the case of Japan, and the demand for the various goods of civilized nations arises; they are imported at first, then plants are set up after the pattern of those of advanced nations to provide the same goods at home, and soon the nation is competing with other nations for the

trade of the world, alive with revolutionized industrialism at home and training her growing citizens on these new lines. To-day Russia, Turkey, and China are taking these more or less initial steps of industrialization. Hence as a world movement there is an evolution of a larger and larger populous area into the industrial order.

Evolution of larger national areas into the industrial order.

—Likewise within any given nation there is an evolution of larger areas of population into the industrial order. The growth of cities in the last century, particularly in the last few decades, in the leading nations of the world is sufficient evidence of the truth of this statement. For instance, the urban population of the United States has expanded within a century from 3.3 per cent in 1790 to 33.1 per cent in 1900. In 1840 it constituted but 8.5 per cent of the total population and less than 21 per cent in 1870. This growth of cities from six in 1790 to 44 in 1840, 226 in 1870, and 545 in 1900, each with over 8,000 inhabitants, is coincident with the industrial and commercial expansion of the nation. Its greatest growth has been coincident with the establishment of transportation facilities and the development of industries. (*U. S. Statistical Atlas*, 1900, p. 440.)

Similar industrial changes in Europe have caused an equally rapid growth of cities. The table on the following page shows the population in 1900 and the percentage of growth of chief cities between 1890 and 1900.

According to the United States census of 1900, out of a total population of 75,994,575, only 45,411,164 persons live in the country and villages of less than 2,500 inhabitants.

Nor is there any prospect that a return tendency towards the country will set in. On the contrary, it is almost certain

that cities all over the world will multiply in population and numbers. Many intelligent writers voice this outlook. Mr. Howe, for instance, makes a startling analysis of tendencies at work which are sure to build larger urban populations. In a trenchant chapter entitled "The New Civilization," he says: "It has been suggested by Mr. H. G. Wells, in his *Anticipations*, that in time, London, St. Petersburg, and Berlin will exceed 20,000,000 in population, while New York, Philadelphia, and Chicago will probably contain twice this number of people. In so far as New York and Chicago are concerned this is probably no fanciful estimate."

City	Population	%	City	Population	%
Greater New York...	3,437,202	31	Berlin.....	1,884,345	19
Chicago.....	1,698,575	108	Hamburg.....	704,669	119
Philadelphia.....	1,293,687	24	Munich.....	498,503	46
St. Louis.....	575,238	28	Leipsig.....	455,120	54
Cleveland.....	381,768	63	Breslau.....	422,415	26
Buffalo.....	352,219	65	Dresden.....	395,349	43
Cincinnati.....	325,902	16	Cologne.....	370,685	31
Pittsburg.....	321,616	53	Frankfort.....	287,813	60
New Orleans.....	287,104	12	Nuremberg.....	260,743	83
Milwaukee.....	285,315	77	Hanover.....	234,986	44

(James and Sanford, *Government in State and Nation*, p. 43.)

With a uniform population density which some of its areas now contain, Manhattan Island would hold nearly two hundred million people. New York will be the commercial center of the world and much more dominant as such than London now is. "On a smaller scale, and in a sense tributary to New York, the cities of Boston, Philadelphia, New Orleans, San Francisco, and Seattle will expand by the same forces. . . . Chicago and St. Louis will perform for the central regions of America what New York now does for the eastern seaboard." The Panama canal and deep

waterways will place them in close touch with all parts of the world. "At no distant day, Chicago, Cleveland, Detroit, Buffalo, and Duluth will be seaboard towns, for the opening of deep waterway connections to the sea is an insignificant engineering achievement in comparison with what has already been done." (*The City the Hope of Democracy*, Chap. I.)

Growing competition in agriculture. — It must not be thought that it is alone in the so-called industrial field that intensification obtains. We find it entering the field of the farmer as well. We have adverted to the fact that in our country the supply of free land is becoming exhausted. The time is at hand when the extravagant methods of extensive farming will have to cease. Our wheat farms, for instance, are coming under severer competition with other wheat producers of the world.

If rich lands of South America are developed and raise large yields of wheat, that commodity is likely to fall in price in the markets of the world. Or if Germany improves wheat culture so as to increase her yield, the world-price feels the effect. Farmers in America have to sell at market prices. Thus, competing with wheat raisers all over the world, they must be prepared to raise it as cheaply as the others.

Again agriculture is absorbing more science and machinery. It needs both to increase its output of crops. From the point of view that industrialism consists in the use of machinery, agriculture is an industrial pursuit, because modern farming takes much complex machinery. On the basis of being conducted on scientific principles, it is also coming to recognition as an industrial pursuit.

Economic tendencies of science. — The progress and development of the world wait on the discoveries of science,

and on the application of these new truths to useful ends. First, because science is a specializing process, it is its nature to become more and more cumulative in its effects. The earth, air, processes of nature, are observed, picked to pieces, understood; and their economic values established.

In the field of inventions we find that machines have multiplied more rapidly in the last generation than in all the rest of the history of mankind. Wallace gave to the nineteenth century the preëminence in great discoveries and perhaps the greatest have been mechanical. The differentiation of machinery may be judged by the United States Patent records. The number of patents and certificates of registration issued in 1901 was 25,558; in 1902 it was 27,136; and in 1903 it was 31,046.

Secondly, science has become the handmaid of manufacture and commerce. Almost every new discovery has been at first a wonder and a toy. We are able to recall how the Roentgen ray was for a long time the sport and plaything of the civilized world. Yet now it is the useful servant of medicine. So radium was at first a mere curiosity but even now is put to stern economic use. Likewise wireless telegraphy has found its place in the communicating system of to-day and promises much for the future. Chemists are acknowledged forerunners and adjuncts of manufacturing processes. Biologists, like Burbank, for example, are confessedly commercial in their aims, that is, desire their work to be commercially valuable to mankind.

Inventors as well as scientists have been industrialized and commercialized by great corporations and made directly to contribute to wealth production processes. The great steel mills of South Chicago employ a corps of some 45

chemists, who not only test the qualities of materials turned out, but work towards improving the iron and steel manufacturing processes. In like manner the General Electric Company of Schenectady, New York, spends about \$2,500,000 a year to develop inventions pertinent to its business. A part of the work of its 50 engineers, at the head of the departments, is to develop improvements in their respective departments. In a recent year 1412 ideas were reported by 300 men. Of that number 615 were developed and patents on them filed at Washington by the company. The patent business of the company alone requires twelve lawyers and twenty-eight assistants to look after it. (*Amer. Jour. Sociology*, Vol. 7, p. 113; and *The World's Work*, June, 1905, p. 6296.)

The economic the vehicle of progress. — Industrialism must be the trend affairs shall take in the United States, if it is to retain its place, and is to make the advance that current civilization demands. Its battles will be commercial without, based upon industrial competence within. To-day among the nations the ancient saying is true: "To him that hath shall be given, and from him that hath not shall be taken away even that which he hath." As the North was victorious over the South forty years ago, because it had developed a more productive industrialism on the basis of free labor, and as to-day Japan repels Russia because it has become industrialized far beyond its opponent, so in the future, more than ever, the road to success and power lies in this direction.

It is a mistake to think that the very best culture and character cannot come through material growth. The spirit of every age expresses itself and builds up the life of

that time through means suitable to and harmonious with that age. Moreover, civilization grows by means of the multiplication of material things through which and in which it expresses and actualizes the life of its people. Measured in economic terms, civilization or life is developed in proportion to the multiplication of wants and to the corresponding ability to satisfy them. The invention and discovery of new things, devices, utilities are demanded to create new wants in humanity. Industrial life produces them in abundance, and commerce universalizes them.

Hence it is that, economically, civilization waits on this process and uses it as an agent of development of its spirit, and of the welfare and satisfaction of its people. All other wants, intellectual, ethical, religious, rest on and develop on the basis of these material utilities as agents fit to serve them. Their richness demands the development of these. They thrive most where these abound.

From this it may be seen how imperative it is that a state, a nation, which undertakes to train its citizens shall make them efficient in the knowledge, manipulation and production of the cars which bear the wealth of the civilization. How imperative that the great masses of men who are to make, produce, transport, sell, participate in the relations imposed by this multifarious activity, and have to meet the problems and duties thereof, should be made intimately acquainted by this state culture with the essential economic factors.

III. ECONOMICS OF CONSUMPTION

Need of economy in consumption. — We have just seen one side of the shield, which reveals the need for more intelligence and skill in the direction of producing the utili-

ties of life. We have now to view the other side. We find there the expression of the necessity for bringing more intelligence and training to the task of consuming the goods produced.

Many of the reasons developed to demonstrate the necessity of greater insight and capability in the processes of production are also reasons for gaining the ability to practice economy in the use of utilities in the satisfaction of our wants. If increased population presses on the supply of subsistence, so that better methods of production are required to supply the added wants, a consequent pressure is felt in the direction of a demand for practicing rigid economy by the people who use up the materials after they get them from the markets. If the using up of our natural resources in the shape of mine products, forests, and fertility of the soil brings a menace and speaks to us impressively that we should conserve these resources and improve our processes so that we may utilize a larger per cent of the materials in working them up into goods, it also admonishes us to exercise greater care in the use of the goods when they come to us.

If we take the item of farm machinery by way of illustration, we may discover with what wastefulness we Americans proceed in our business. One of the commonest scenes in North Dakota, for example, is the yard of the house and barn of the farmer littered with farm machinery in all stages of degeneracy, from the new implements to the disintegrated parts of old implements lying about, all standing out and taking the full shock of climatic exposure. Within a year I stopped at the home of one of our most prominent men. He owns several thousand acres, has a large house and

barns, and some forty acres devoted to grounds in connection with the buildings. Practically the entire forty acres was covered and littered with farm machinery. There were at least a dozen wagons, many hay frames, eight or ten harvesters, several hay rakes, mowers, drills, etc., etc.; some new, some partly worn, others broken down, and many widely scattered fragments. A great many thousand dollars' worth of implements were thus displayed and had never been housed. Lack of care was evident in all this, as also in that of the out-buildings. Lack of paint and repairs was all too visible.

Moreover, manure from hundreds of head of stock and from rotting hay and straw stacks was lying about in immense quantities. There were some small lakes near by which furnished water for the animals. The water of these ponds was colored yellow by the drainage from the manure. It must have been menacing to the health of the stock. To add to this, I discovered several dead animals lying near the edge of the small lakes in the lots and pastures, wholly uncovered, and polluting both water and air. I have never seen a more impressive demonstration than there of our wastefulness and heedlessness of economics in our businesses. What occurred on that large farm, in a large and possibly exaggerated form, pretty generally occurs on our small farms.

Now when we remember that the implements used on our farms are made of wood from the forests and of steel from the mines, and that the machines and the furnaces required in the making of the implements are fired by coal from the mines, we can see that to permit the useless destruction of the farm or other kinds of implements is to be wasteful of

our natural resources, and at the same time it wastes our money directly invested in the implements.

We could take up the subject of soil, and find that our farmers have been sapping the fertility of the earth unduly by ignorance of the right methods of farming. Or we could go into the matter of housekeeping and discover that our food expenses are higher than they would be if we knew more about foods, and about the relative sustaining values of the various kinds of foods found in our markets. The same would be found to be true of clothes, furnishings, and decorations of our houses, of the stores and fuels, etc. On every hand we should discover that if we really knew more about the articles we use in life and depend on for our well-being, we should get more out of our material utilities, expend less of our income in so doing, and use up less of the world's ultimate supply. And this knowledge as certainly awaits upon educational emphasis and attention as does information about numbers, geography, or history.

Were the majority of our citizens wealthy, we might disregard this lesson, in so far as it concerns individual well-being. But the majority of our American inhabitants are practically without property. The bulk of wealth in the United States is owned by a very few people. The greater part of the remaining wealth is possessed by far less than half of the population. The masses of the people are dependent on wages and salaries for their support. It could be shown that the average income of the workers on which to support a family does not exceed \$400 or \$450 per year. These facts demonstrate that the workers, the great masses of the American people, have a need to understand the principles of economy in consumption.

Spiritual necessity of training along consumptive lines.—

We have the very highest grounds for asserting that attention should be paid to the matter of giving insight in methods and principles of consumption. For all goods of all sorts, whether they are material or spiritual, whether something to delight the palate or to charm the soul, are produced to be consumed; and that means to satisfy a want, a desire, a feeling. In other words, all goods and services are to produce satisfaction; to create happiness and contentment in life; to contribute to non-material ends.

Now, there are two ways we may conceive by means of which the satisfaction in life might be enlarged and enriched. One is by increasing the number of human desires and wants; and consequently, the number of utilities or kinds of goods to appease them. This is secured by means of production. The other way is by training the feelings and capacity of human beings to enjoy. There is a very large field for educational effort in this direction, just how large we do not exactly know, as yet. At any rate we are coming to appreciate that there is a large and rich development ahead of the human race which may be assisted by taking the improvement of consumption under intelligent direction.

As recent writers have pointed out, we have largely lived under a scheme of prohibitions and penalties in the past. Our commandments have been those of the "do not" sort. We have been shown what not to do more than what to do. We have been taught to suppress our feelings and inclinations, rather than instructed how to guide them in directions where they may be fruitfully exercised and enlarged. In certain respects great gains have been made toward a larger view.

Not so long ago all our passions and instincts were regarded as inherently bad and hence they were to be suppressed like reptiles and vermin. Now our "new psychology" builds our mental and moral nature on those basic factors. Our mental structure is made possible by, and begins with, our instinctive and impulsive nature with which we start life. Our moral-will arises out of years of practice in coördinating and perfecting our impulsive actions. Looking at individual life as a development, we do not see how there could be a mature, comprehensive, "higher" life without the existence of this "lower" life. All the time we are dependent on the play and presence of these factors and forces of the so-called "lower" life. In fact, all our higher tastes and enjoyments rest on them and are made out of their very materials.

That there are possibilities of getting more enjoyment out of the things we consume, of rising to greater heights of satisfaction in making use of what comes to our lot, is in a measure indicated by some of the gains which have been made and in certain facts coming to light.

In the matter of enjoying the food we live by, there has been great gain made in the course of evolution. Most of the lower animals bestow very little attention upon the process of masticating and swallowing, indicating that the satisfaction gained by means of tasting what they eat is very small. The dog is a good example of this. He rushes upon his food, grabs it with his mouth, and swallows it with hardly a pause for the act of chewing.

In the case of men, the satisfaction connected with mastication is relative to the stage of civilization. Primitive people love to eat, but it is not for the sake of the eating

process, but for the sake of the food. Their chief aim is to get the food into the stomach. Not much time is spent on mastication. I have eaten with a group of Indians who formerly were "blanket" Indians. The meal they furnished was chiefly meat. It was boiled and served in the rough. To me it looked uninviting in the extreme, but to my primitive companions it was appetizing. While I was getting my chunk of the flesh cut into smaller pieces, and was getting under headway in properly grinding them, my associates had thrown the large chunks into their mouths, and with hardly any attempt at mastication, had swallowed them.

Time spent on food preparation and eating is a fairly good measure of civilization and culture. We spend much time now on preparation of a great variety of foods; on inventing new and different methods of preparing the same article for the table; on seasoning and enhancing the flavors; on trimming and decorating the tables and dining parlors; on devising delicate and beautiful designs of silverware and pottery for table use. All this is a symptom of the high estimate we place on the process of partaking of food as a means of giving immediate satisfaction. In other words, it has high æsthetic value to us, and is likely to have more.

Now Mr. Fletcher advises us that we must chew each morsel of food we take into our mouths until its taste changes or ceases altogether; that by so doing we get the largest amount of pleasure out of eating, economize in food, and aid digestion. There are many authorities on foods who support him. Anyway, we are likely to develop away from the delight of gormandizing of primitive and

uncultured people to a fine and more differentiated enjoyment in food consumption.

What has been said about food may serve to typify the increase of satisfaction we might hope to gain in connection with the other modes of consumption. Perhaps no other process can yield quite so intense satisfaction as the consumption of food, because the latter is the direct support of life. But we can increase our enjoyment of transportation and travel; of building our houses for beauty and appearance as well as for convenience; of decorating our houses and grounds; of using clothing and appliances; of books, music, etc. If we have teachers who have the appreciation, and are trained in the economies of enjoyment, the children will imitate and the scope and intensity of our all-around satisfaction and well-being will be enlarged. The genuine spiritual advance of society will be furthered.

CHAPTER VII. PATHOLOGICAL DEMANDS ON EDUCATION

IN considering this subject it is not deemed necessary for our purpose to attempt to point out all the ills of society, to indicate their causes, and to show how the educational system might seek to remedy the situation. If a few, even one or two, typical cases of defects can be located, and if it can be shown how training for life might be conducted to strengthen society there, a sufficient purpose will be realized. The legitimate inference will then be that other lines of social pathology could be influenced by education in a similar beneficial manner.

Magnitude of pathological conditions makes consideration imperative. — If it were possible, in short space, to portray the colossal magnitude which pauperism and criminality assume in modern society, its statistical measurement, the horrors and misery, the waste and sacrifice, the needlessness and heedlessness of their existence in a rational society, the inherent fascination of the matter might attract educators. This must be left to such men as Hunter and Riis in their effective works. Our hope here is to show their vast proportions, to indicate the consequent menace, and to suggest how educators or education may be of help.

The economic loss sustained by our nation by reason of these classes is enormous. There is no national report which adequately enumerates the amount of crime and pauperism. Private estimates for pauperism vary greatly.

Hunter, for instance, believes there are 10,000,000 persons in the United States who lack things needful for physical validity. He sums up his statements relative to poverty in the following way:

“There are probably in fairly prosperous years no less than 10,000,000 persons in poverty; that is to say, underfed, underclothed and poorly housed. Of these about 4,000,000 persons are public paupers. Over 2,000,000 working men are unemployed for four to six months in the year. About 500,000 male immigrants arrive yearly and seek work in the very districts where unemployment is greatest. Nearly half of the females in the country are propertyless. Over 1,700,000 little children are forced to become wage earners, when they should be in school. About 5,000,000 women find it necessary to work and about 2,000,000 are employed in factories, mills, etc. Probably no less than 1,000,000 workers are injured or killed each year while doing their work. About 10,000,000 of the persons now living will, if the present ratio is kept up, die of the preventable disease, tuberculosis.” (*Poverty*, p. 337.)

Professor Bushnell, after considering state reports of Massachusetts, Connecticut, New York, Pennsylvania, Ohio, Michigan, Wisconsin, and California, specifically, says: “The total reported public expenses for the maintenance of the dependent, delinquent classes (chiefly in state institutions) in these eight states alone as discussed above was this: for one year \$48,135,392.51. For seven of these states (excluding California) the total number of abnormal public dependents was 609,895, or one forty-second of the total population of those states. The population of these states was about one third of the country as a whole.

"If the same proportion of public dependents were maintained for the other states of the Union, the total number in the country would be more than 1,800,000 in receipt of public relief. But in all probability the proportion of dependents is not high in other states." (Why, the author does not state. One does not on the surface see why Indiana or Oregon should not have as large a percentage of paupers as neighboring states reckoned among the eight.) "However, the total number of private and public abnormal dependents in the United States must not be far from 3,000,000, or one twenty-fifth of the total population of the country, at an annual expense of nearly \$200,000,000, or one tenth of the total wage income of all the manufacturing establishments of the country."

With respect to crime alone the same author says: "Mr. Eugene Smith estimates that there are in the United States about 250,000 who make their living, at least in some degree, by the practice of crime. Their annual income, he thinks, is \$1,600, each, or an aggregate income of \$400,000,000 annually. Taxation caused by crime is set at \$200,000,000." (Henderson, *Modern Methods of Charity*, pp. 385-390.)

"Mr. Charles D. Kellogg has estimated that three millions of people in the United States were wholly or partially supported by alms, during a recent year, and that the support received by this number was equal to the total support of half a million paupers during the entire year." (*Encyclopedia of Social Reform* — article, Pauperism.)

To the uninformed person these figures seem exaggerated. Yet the same conditions prevail in other countries. Over one third of the population of London and other English

cities are impoverished, and the British government has been forced to take cognizance of the deplorable situation and to begin relief considerations. Our own government publications, naturally conservative, constantly divulge the woeful status.

One certainly is conservative in saying that in the United States there are 500,000 persons entirely supported by society and some 2,000,000 persons partly supported. The productive power withheld from society will certainly average \$400 per year. For the half million productive all the time this means \$200,000,000. The loss to society from the others partly unproductive will almost or quite equal this amount. The criminal class, as Mr. Smith estimates, extracts \$400,000,000 annually. Beyond this all these persons consume the products of society about equal in value to their productive power withheld, let us say something like \$400,000,000. Further they require institutions of various sorts for their detention or care, superintendents, attendants and agents by the thousands who are therefore taken from productive enterprises and further must be supported by society; courts, government officials, processes of law, medical relief, etc., probably equaling in money terms all the foregoing sums.

If we should thus roughly estimate the cost, in terms of wealth, to our society annually imposed by this element, \$1,500,000,000 would be conservative.* But if we further rate it in terms of positive misery, negative and atrophied character, swamped and mutilated ideals, putrid and malig-

* Rev. J. J. Munro, chaplain of the Prison Evangelistic Society of New York, estimates the annual direct and indirect cost of crime alone in the United States for 1906 at \$1,075,000,000 (same, new edition, p. 335).

nant social conditions, or by means of any spiritual standard whatsoever, the loss appears astounding. The system which perpetuates the formation of such unprofitable masses seems self-condemned and must be weak if it cannot find and apply a remedy. In so far as the educational system is accountable, it cannot be rated as highly scientific, expedient or effective under its record.

I. GENERAL CAUSES OF SOCIAL DISEASES

In considering the causes of poverty and crime, we shall have to refrain from indulging in minute details. It will be obvious, in a glance at the table of causes of poverty, that a great variety of causal conditions exist. The same would appear were a similar chart made for crime. We shall confine our attention to just those essential facts and typical causes which denote the connection between the social diseases and education.

Defective social structures. — The really most ultimate and general cause or set of causal conditions of crime and poverty exists in the shape of defective social structures.

Social structures or organizations in their relation to the individual may be working poorly. An organization or institution is intended to serve and satisfy social members in its given line. If it fails to do this, so that the individual's wants are not met, there is so much social disease. Thus it may be that the economic organizations are not properly working. Wages may be too low, hours too short, necessary goods too high. Individuals' wants which should be satisfied through such structures are stunted or unmet. Hence, poverty, pauperism, crime, as the result perhaps. Or it may be that the family institution has been impaired

so that the children's moral training is neglected and the issue for society is likely to be criminal.

The conclusion seems to be that defective social structures or organizations mean social disease; and that we locate the disease by its effect on social beings. Defective individuals are the sign of inefficient organizations. A perfect society would have a full quota of efficient organizations, ably and actually satisfying all the wants of its individuals, which individuals would have been perfectly formed and trained under its institutional guidance. Those persons would be completely socialized.

Heredity.—It has been said that if you desire to secure a good man you must go back to the grandparents and see that they are fit. While it is true that the factor of heredity is likely to be much overrated in its power to produce good or bad men, it is nevertheless a forceful one for good or ill. The truth may be put in the form of a general statement, namely, that our minds and lives rest on physiological conditions, the condition of validity or invalidity of our bodies, and that it is pretty difficult to get good results out of poor conditions. If we are born with weakened bodies, we are less able to compete in physical and mental work with those who have their physiques well developed.

If we inherit disease or a tendency to disease, we are likely to be greatly handicapped in the struggle of life. Disposition, temperament, tastes, and probably traits of character are handed down from parent to child. A weakness or affliction may not be passed on in its exact form, but is likely to inflict a weakness in some form. Alcoholism may result in offspring who are maniacs, epileptics, vicious in character, or subjects of lingering diseases. Children

may inherit the characteristics of ancestors several generations removed. (See Henderson, *Dependents, Defectives, and Delinquents*, pp. 14-16.) The marriage of close relatives may prove unfortunate in offspring, particularly if either party is physically weak.

It is possible that good raising and care of offspring may overcome some of the defects of inheritance, but how much better were there none to overcome. Anyway, the millions of those who are at birth physically handicapped and who have not proper nutrition, hygienic attention, and good home raising are just so many candidates for almshouses, reformatories, prisons, and kindred institutions. The laggards in school and the laggards in life are those who, in many cases, did not get the "square deal" at birth. Physical deficiency by birth is likely to act as a predisposition to social deficiency in the absence of excellent training.

Poor homes. — A recent national convention of charity workers was unanimous in pointing to the home as a leading factor in ruining or saving the child. The National Educational Association of 1909 likewise devoted large attention to the duty of the parent, and laid heavy emphasis on the function of the home. It is a commonplace in sociology that the home is a unique and fundamental social institution with duties to perform which cannot be readily assumed by any other; among the most important of which is the moral training of children.

A poor home is one which is short in any way that is necessary to the right development of children. It may be short in shelter, food, and clothing, so that children may not have the strength and health for the growth and duties of childhood. It may be lacking in its spiritual setting,

without books, papers, pictures, enlightening and elevating conversation, as a consequence of which children are dull and backward mentally. The cause of dullness of some of the so-called "dull children" who enter school is just such paralyzing home conditions. Lastly, a poor home is one which allows the child to do as it pleases, to run wild in all sorts of associations, and wields no influence in shaping the character for good. And, sad to say, some homes of this type go further, even actually polluting the lives of the children.

Neighborhood associations. — The child's earlier days are spent exclusively in the home. But from about the third year on, its life widens out to take the influences of the neighborhood. The great majority of children pass a very large part of their time in the play associations of the immediate community. Even if the home is doing its duty, internally, toward the child, it cannot deprive it of the association with children without stunting and dwarfing its nature. Play is as essential to the proper development of the young as atmosphere and food. Moreover, the majority of mothers cannot hire help, and have the sole charge of the children of the home. It is next to impossible that they should keep the young under their supervision all the time. There follows, naturally, just as the facts denote, the indulgence in promiscuous neighborhood associations.

The imitative nature of the child makes these associations very powerful. Children imitate children more readily than they imitate elder people. Good habits formed within the home may be torn down and displaced by bad ones, in short order. This makes bad associations of all sorts destructive. We remarked on the purity of our child's lan-

guage until she mixed with other children. Then a rapid change set in. Other children of the region used poor grammar, and some rough words. Our child responded and her chaste English immediately faded. We could not counteract the example of the other children. Because of plasticity, extreme suggestibility, and imitative responsiveness on the part of the young, degrading and immoral associations and influences in the neighborhood are rendered unduly pernicious and dangerous. They are extremely active and forceful in establishing habits of shiftlessness and criminality.

Poverty. — Poverty is a pathological social condition in itself. When it becomes pauperism it certainly is, and some contend that all poverty is so. Poverty occurs whenever the income is not sufficient to maintain physical efficiency. Good service cannot be given, nor good health and morals maintained, wherever this is the case.

But poverty begets more of its kind, and also brings in a crop of other social ills in the form of crime, ill health from poor food and bad sanitary conditions, and a general low tone of life. Floods of ills overtake those who have not the means to build or rent warm houses, purchase sufficient fuel to warm them, provide plenty of nourishing food so that the workers and the children are kept strong, secure drainage and sewage disposal, ice for the preservation of foods in hot weather, medicine and medical attention in cases of sickness, and means of intelligence, — the books and papers. Inheritance steps in to perpetuate weakened bodies, and constitutions undermined by overwork, under-feeding, exposure, and disease. Ignorance and need may furnish the conditions of temptation and immorality, and

the second generation may be criminal in tendency because of deteriorated constitution and minds, for such are prone to criminal tendencies by reason of weakened wills.

Lack of skill. — It is becoming increasingly apparent to students of social diseases and of the backward classes that the lack of skill constitutes a very large factor in their production. As an extended notice of this subject is given later in the chapter, we shall defer its consideration to that place.

II. DEFECTIVE EDUCATION AND SOCIAL DISEASES

Having enumerated the chief causes of pathologic social conditions, and explained the nature of each as far as our space would permit, let us now consider whether defective education could enter as a cause in the case of any of them.

Heredity and poor homes. — In the case of inherited physical conditions, it might seem far fetched to hold the schools responsible. From one viewpoint, the connection is remote. Considering that little attention has been paid in the education of the young to the practical phases of physiology and its articulation with social matters, we have little right to reprove education. Having in mind, however, as was said above under the heading of Heredity, that poor food, unsanitary living, exposure, intermarriages of kin, etc., are likely to entail weakened constitutions upon the second generation; that these enfeebled persons constitute the class which is predisposed to furnishing victims of poverty and criminality; and that these things should be known; we may regard the omission of this knowledge by the schools as an indictment. We may say, with reason,

that in so far as enlightened teaching would prevent hereditary tendencies, in that far education is defective.

In the case of poor homes, perhaps much the same kind of statement would have to be made. In so far as the educational system is responsible for withholding from the growing generation the necessary knowledge relative to the nature and functions of the home in human society and to the responsibilities and duties of parents as respects their children in their development into citizenship; and in as far as the larger social situation does not so press upon the parents that they are withheld from exercising their parental duties; to that degree education is indictable and defective. But in saying this we should be mindful that, as yet, the mass of people are ignorant of the fullness and importance of parental duties; that trained social workers are just beginning to appreciate something of the situation; that advanced educators are but now catching sight of the largeness of the problem; and that no one and every one is to blame.

Hiatus between school and home. — We have already given attention to the home as a cause of pathological social conditions, in permitting the children to play in all sorts of associations, and in imposing on them its own low standards in many cases. Let the reader refer to that former passage for the treatment of that phase of the subject.

This does not appear to indict the school. If it is the sin or omission of the home it cannot be that of the school. Maybe we shall not be able to prove the connection between education and the situation. We do not want to strain the case, but it appears like this, to-day.

Whether right or wrong, the development has actually taken place in society, and is going on, that the homes have contracted in the exercise of their functions while the schools have expanded in theirs. The schools have come to exercise a larger and larger influence on, and control of, the time of the children. How far this tendency is to proceed is not determinable. It is apparent that the homes have contracted farther than the schools have expanded. It is not at all certain or very probable, in the multitude of cases in the cities, that the homes will ever again expand and retake their old functions. There is a great hiatus between the home and the school, the great play period time, where supervision of child life is imperative, but where none is now provided. During this large and important space of the day and of the year no one stands sponsor in society; and it is in this time that contaminating associations are contracted and anti-social undertakings engaged in which pervert and spoil the life-habits and character. It is the opinion of practically all eminent juvenile court judges that idleness and bad associations are the great agents in producing criminal offenders.

Want of vocation as a cause of poverty. — We owe to charity workers, in the great cities of the world, the collection of reliable information of the specific causes of poverty. As an illustration of these findings, the table prepared by Professor S. M. Lindsay is given. (*National Conference of Charities and Correction*, 1899, p. 370.) It agrees very closely with the causes collected from investigators in the chief European and American cities. Baltimore, New York, New Haven, and Boston are the four cities which furnish its facts.

In the table given here only the per cents of average for the four cities appear, as being sufficient for our purpose.

CAUSES OF POVERTY.

	Baltimore, New York, New Haven, Boston	Totals
Causes indicating misconduct:		
Drink.....	15.28	
Immorality.....	.44	
Shiftlessness and inefficiency.....	7.51	
Crime and dishonesty.....	.68	
Roving disposition.....	1.19	
		25.10
Causes indicating misfortune:		
Lack of normal support:		
Imprisonment of breadwinner.....	.76	
Orphans and abandoned.....	.34	
Neglect by relatives.....	.91	
No male support.....	4.30	
		6.31
Matters of employment:		
Lack of employment.....	23.16	
Insufficient employment.....	6.51	
Poorly paid employment.....	1.81	
Unhealthy or dangerous employment.....	.09	
		31.57
Matters of personal capacity:		
Ignorance of English.....	.41	
Accident.....	2.86	
Sickness or death in family.....	22.27	
Physical defects.....	3.69	
Insanity.....	.85	
Old age.....	4.00	
		34.08
Not classified.....	2.85	

Of these various causes, it will be seen that those indicating misfortune amount to almost 72 per cent, while those indicating misconduct equal only a little over 25 per cent. The chief group of causes is "matters of personal capacity." Lack of employment is the largest single factor, while

" matters of employment " amount to nearly one third of all causes. Drink, so often taken to be the almost exclusive cause of poverty, is seen to account for only about 15 per cent.

An inspection of the causes of poverty, given above, shows there is plenty of opportunity to connect poverty with the unskilled condition of the individual. Under the heading " causes indicating misconduct," there is large scope for lack of skill to operate as a cause. Hardly one of the subheadings could be exempted from the charge that back of it as a condition which accounts for it as a fact in the life of the individual is the want of special, technical ability to get and keep work; and the lack of a character of sterling worth, due to the fact that the individual has not had his life organized and disciplined through the definite and constant demands special training imposes.

I should claim that " shiftlessness and inefficiency," for instance, are the result of the want of definite training. It is a habit of life ensuing upon persistent idleness permitted in youth. Observation of life and psychical studies have made it clear that the normal state of children is one of activity. They love to expend energy in accomplishing things, not only in play but in suitable tasks. Proper training would utilize the love of action and of making effort, in childhood and youth, directing it in specific channels and organizing it into a life habit. Love of idleness would not result. Thus laziness is merely a sign of a lack of training and skill, a lack of organized activity through which the individual finds satisfaction in expressing himself.

In the same manner we might go back of the other items under this first general heading.

Under "causes indicating misfortune," there is smaller possibility of tracing the causes back to a more conditioning one, such as lack of definite skill. Yet it is apparent that several items might yield to the treatment. Lack of skill might be a factor under "lack of normal support," in the first three under "matters of employment;" and possibly in the third and sixth under "matters of personal capacity."

It would be safe to say, then, that a very large percentage of poverty is caused, directly or in the second stage removed, by a lack of useful training. We should not be warranted in attempting to state it as a definite percentage. To establish the fact that there is a connection between much of the existing poverty and the untrained, unskilled condition of the impoverished persons, is all we might hope to do.

A study of the industrial situation would appear to force the opinion on us that a considerable proportion of the workless people do not have work, either because work in general is not sufficient at the time for them or because it is not to be found in their particular locality. We are also made aware of the existence of a considerable residuum, the members of which are unable to compete successfully in the labor market with the more skillful members of society. Just what per cent of the idle class this residuum is in the United States, it would be difficult to say. Mr. Charles Booth, the thorough and scientific investigator into social conditions of London, shows that over 30 per cent of that great city's population is below the poverty line, and is made up of the occasional, casual, irregular workers, all unskilled. (*Labor and Life of the People of London*, Vol. 2, pp. 20-21.)

Want of vocation as cause of crime. — In considering the cause of crime, we must put the economic conditions as the first and greatest, since want among the poor and greed among the rich and influential alike lead thereto. Carroll D. Wright says: "Certainly hunger leads to more crime of a petty nature, perhaps, than any other one cause." "Labor, properly renumerated, is an effective guarantee against the commission of crime." "In a state in which labor had all its rights there would be, of course, little pauperism and little crime. On the other hand, the undue subjection of the laboring man must tend to make paupers and criminals." (*Encyclopedia of Social Reform*, First Edition, pp. 423-4.)

Mr. Wright then shows that a lack of proper training has a large share in producing criminals. "It is statistically true that enough of knowledge to be of value in increasing the amount and quality of work done, to give character, to some extent at least, to a person's tastes and aspirations, is a better safeguard against the inroads of crime than any code of criminal laws." "The kind of labor which requires the most skill on the part of the workman to perform insures him most perfectly against want and crime, as a rule.

"This statement is fortified by such statistics as are available. Of 4,340 convicts, at one time, in the State of Massachusetts, 2,991, or 68 per cent, were returned as having no occupation. The adult convicts numbered at that time 3,971. Of these 464 were illiterate; of 220 sentenced during the year, 147 were without a trade or any regular means of earning a living. In Pennsylvania, during a recent year, nearly 88 per cent of the penitentiary convicts had never been apprenticed to any trade or occupation; and

this was also true of 68½ per cent of the convicts sentenced to county jails and workhouses in the same state during the same year. In Mr. Frederick Wines's recent report on homicide in the United States, in 1890, it is shown that of 6,958 men, 5,175, or more than 74 per cent of the whole, were said to have no trade."

Prof. R. P. Falkner, on the basis of statistics collected by the Wardens' Association of the United States and Canada, gives the following table comparing the occupations of prisoners with those of the people.

Occupation	Population 1880, Per cent	Prisoners, Per cent
Agriculture.....	44.11	15.27
Personal and professional.....	23.42	72.09
Trading and transportation.....	10.41	3.17
Mining, manufacturing and mechanical.....	22.06	6.55
No occupation.....	.....	2.79
Criminal pursuits.....	.....	.23
	100.	100.

The "personal and professional" include common laborers. Thus the higher the grade of labor, the less the liability to crime. "Prisoners as a rule are accustomed to the rudest kind of labor. In the main they are unskilled, and probably also irregularly employed." (*Encyclopedia of Social Reform*, pp. 403-4). Morrison of England states that 77 per cent of juvenile offenders had not been apprenticed to any trade, and that about 75 per cent of adult prison population were without definite vocation. In the general community laborers of all kinds amounted to only 20 per cent of the population over 15 years of age. "Therefore, according

to the most moderate calculations, the class of low-skilled workmen is between three and four times more numerous in the prison population than in the general community. . . . The principal cause undoubtedly is that the ranks of the general laborer are recruited, as a rule, from the most backward, the most impoverished, the least self-respecting class in the community." (*Juvenile Offenders*, pp. 166-70.) Thus he couples both criminal and poverty subjects with lack of skill and trade. Booker T. Washington in a passage previously quoted states that "90 per cent of the colored people in prison are without knowledge of trades and 61 per cent are illiterate."

III. THE REMEDY PREVENTION

The doctrine of prevention. — Now we have reached the place where the treatment must be made to contribute to education. We want to know whether or not education can reach the causes of crime and pauperism. At once it becomes evident that certain of the causes are outside the immediate influence of training. Criminal and pauper predispositions, if they are ever actually and absolutely inherited, certainly cannot be eradicated.

Recent studies of poverty in the United States and Great Britain emphasize the lack of employment as one of the greatest causes. Thus the *New York Labor Bulletin* for September, 1903, indicates that in portions of the year from 20 to 30 per cent of the people are in enforced idleness. In Chicago a Federal report (*Ninth Special Report*, p. 29) puts the percentage of unemployed at 56.97. The United States census of 1900 (Vol. *Occupations*, p. 226) shows that for the whole country over 22 per cent of the popu-

lation were in enforced idleness during a part of the year, the largest number being in manufacturing, mechanic, domestic and personal pursuits. "The Charity Organization Society of New York shows that from 43 to 52 per cent of all applicants need work rather than relief. It applies equally well to Chicago and some other cities. The thing most evident in these facts is that poverty, due to industrial derangement, is not a problem which charitable organizations are fitted to solve." (Hunter, *Poverty*, p. 75.)

Our presumption with reference to the unsocialized is that the remainder of the environment, that is, the associational and cultural influences, are stronger than the hereditary element. There does not seem to be any weighty argument against this position. The plain facts are in favor of it, save those relating to congenital cases. Prof. Richard T. Ely states that the comparative weight of environment and heredity in producing anti-social individuals is as nine to one in favor of the former. (*The Outlook*, September 16, 1893.) He cites, as evidence, the practice of taking children from city slums and of the worst parents and placing them in good homes. Had they remained in the slums they were destined to become prostitutes, paupers and criminals. In good environment the vast majority grow into good citizens. C. Loring Brace testifies that in forty years the Children's Aid Society of New York has placed 84,000 children in homes, "and it is our experience that no matter what the parents may be, if the child is taken away at an age so early that it has not yet understood the wickedness about, if placed in the country home with kind and judicious adopted parents, it is almost certain to do well."

Modern charity work, in its care of children, is based on

the recognition of the dominance of environment. Thus in Denmark "great care is exercised in selecting the foster parents. Ordinarily children are placed in the country with particular persons instead of in care of asylum wards. This is accomplished through the benevolent assistance of pastors, teachers, physicians, etc., who become responsible for the control of the children." (J. M. Gillette, in Henderson's *Modern Methods of Charity*, p. 375.)

Among the many methods of treating dependent children in England, "the boarding-out system has the obvious advantage over any other form of institutional care, that it furnishes a natural instead of a more or less artificial life for the child. It makes possible that individual care and those personal attachments without which the normal development of the child cannot take place. Moreover, it effectually removes it from the atmosphere of pauperism and puts it into a normal relation with its social environment." (Chas. A. Ellwood, in Henderson's *Modern Methods of Charity*, p. 208.)

The practice of parents, educators, churches, juvenile courts, etc., is and has been to teach the power of good wholesome surroundings to make and keep character and life. (See Chapter IV, *Rôle of the Social Environment*.)

Since prevention is coming to be regarded as the fundamental method in various remedial lines education must be expected to find its contribution to the solution of these social problems to lie in the same kind of procedure. It is coming to be held by thoughtful medical practitioners that the larger work of the physician is to be that of preventive practice. It is reported that Lankaster, in a scientific address recently, took this position. "Coming

down from the regions of academic thinking, he made a timely plea for more public encouragement of the study of preventable diseases. Fifty million dollars he thought not too much to spend every year in Great Britain alone for that purpose, in order to save the thousands that needlessly die every year. It is an idea that is attractive to the public and one that is more and more appealing to the progressive medical men, that the function of the physician should be largely one of preventing diseases instead of curing them when neglect has permitted their inroads. In the United States, as he pointed out, there is a distinct tendency of rich men to give large sums of money for the equipment and the expenses of research in this and other scientific fields." (*World's Work*, September, 1906, p. 7931.)

Up to the present generation the treatment accorded pauperism and crime has been little fitted to render a permanent social cure. Criminal treatment has evolved from the method of inflicting revenge to penalty as reformation; then to prison procedure in the nature of employment and training, as at present, intended to reform and to make criminals over into real valid citizens. None of these methods have lessened the number of criminals much, if at all. Society goes on producing them as prolifically as ever.

Likewise with reference to pauperism, paupers were one time punished as criminals, later helped, with no effort to make them self-supporting; and now the best charity methods seek so to administer help, as not only not to make them more dependent but to restore them to independence and self-sustenance. Yet pauperism continues. Paupers are becoming more numerous. Charity methods do not cure the evil.

The truth may be put in a sentence, that society will not get rid of these evils until their production is prevented. Make both impossible by making every social member really social and productive. One method of course will be by means of vocational training. This will produce such a reorganization of education that no one can get out of school until he has been trained for citizenship and given a vocation.

Thomas Moore in his *Utopia*, centuries ago, said that crime and pauperism were not curable by punishment and such methods as society then used. He then pointed out that idleness and lack of skill were accountable for these phenomena. Hence the cure would be training to work and for doing useful things.

The world is just now catching up with his wise suggestions. Penology, as a science, does not view criminals, for instance, as innately and intrinsically vicious. It views criminality as the result, largely, of untrained and misdirected energy. Hence prison life is becoming a process of training and education into something definitely useful.

We have seen that, in the production of both pauperism and crime, character and work-ability had a great deal to do as causes. Statistics were given from state prisons to show that the inmates were untrained and irregular workers before entering prison life. Facts taken from Ely, Wines, Faulkner, Washington, and Booth indicated that the lack of ability and skill, which special training would give, largely accounts for the existence of adult criminals and paupers. We also found Morrison showing that juvenile offenders are made out of the unskilled vocationless class of youths. It would seem, therefore, that educators have a

very strong clew to the solution of the educational problem, so far as it is related to these phases of life.

Vacation schools. Another method of preventing poverty and criminality is to bridge over the gulf existing between the home and the school. Not all schools have remained inactive, relative to this important matter. In some of our larger cities, and in fact in many outposts throughout the country, attempts are being made to cover a part of the out-of-home period of child life. The vacation school is a very successful attempt to provide activity and supervision of the larger part of the long vacation. During half of each day vocational work, along with some academic studies, is provided under the direction of competent teachers. The vacation schools are located in those portions of the cities where the population is most congested, wholesome playgrounds non-existent, and bad associations most rampant. Previous reference (Chapter III) has indicated the popularity and the service of the work done. Students of juvenile delinquency hope much from this attempt.

Playgrounds. Another attempt in the same direction is the playground association movement. It began back as far as 1826, and was confined to Europe in its earlier stages. It is a recognition of the value of play, and of the necessity of providing a place in congested quarters of cities under wise direction. The scope of playgrounds is usually this: sand piles for little children — to be renewed frequently so as to keep them clean and wholesome; gymnasium, running tracks, basket-ball grounds, etc., for boys; and seesaws, swings, etc., for girls. Special exercises should be provided for both sexes during adolescence, such as dumb-bells and staffs in the open air.

"Seward Park, in New York city, is a type of the best playground and a brief description will give the best idea of the function of this institution. It cost the city \$1,800,000 and is located in the Ghetto, a very crowded down-town district. At one end a complete outdoor gymnasium surrounded with a running-track; at the other, swings, seesaws etc., for girls; in the middle, sand piles, tents, etc., for the little ones. The mothers are encouraged to be present with their little ones, and provision is made that milk and crackers can be bought on the premises. New York city has set aside \$300,000 per annum for the purchase of playgrounds."

A national playground association now exists, with Theodore Roosevelt as honorary president, and Dr. Luther Gulick of New York city as president. Over twenty important cities in America are supporting playgrounds. In some the movement is new, in others reports of attendance are not made. New York city has the largest attendance, about 25,000 in attendance; Chicago, 15,000; St. Paul, 8,000; etc. The cities either entirely or partly support the playgrounds out of special funds.

Some attention has already been paid (see chapter on Democracy) to the demands of the home on the schools, and nothing more important can be added now. As to what the schools could do to make life fitter through inheritance, some bare suggestions were made in Section II of this chapter. What might be developed out of those suggestions would likely be mere theory. We should do better to devote our attention to that which is more apparent and certain.

Since our central thought is the value of organizing

education about the vocational factor, let us observe the effect of this kind of education in the direction of the reclamation of the anti-social. Along with this vocational feature go the restraining, the guarding, and the cultural, as accompaniments; and they might be said to be centered about it.

Reclamation of children by special training. The thought of those who attempt to reclaim wayward children is steadily turning toward giving them a training for self-support, as perhaps the best means of bestowing that civic virtue which is necessary in life. Not only are wayward children so cared for but also indigent or dependent children. Thus, it is noted that for one purpose or the other industrial schools exist in America, England, Ireland, Scotland, and no doubt in other countries, and are supported by the Jews in various lands. It is difficult to find an account which deals with these schools in the aspect we need here. We must make a few cases serve to illustrate our point.

England has for some time been making the attempt to reclaim wayward children by means of industrial schools. In 1900 these schools numbered 142, with an attendance of 24,718 children. They were established by voluntary agencies, but now are largely supported by government funds. Children who are vagrant, beg, are indigent, are refractory against parents, guardians, or are in a Poor Law School; who are truant, associate with criminals or prostitutes, or who, being under twelve, have been convicted for the first time of an offense punishable by imprisonment, may be committed.

“The industrial training given in the industrial schools has been much improved in the last few years. Now the

best schools employ competent teachers who give technical instruction of a high grade, both theoretical and practical. The efficiency of the schools is, however, greatly injured by lack of classification, especially classification according to age. Usually children of all ages from 7 to 16, and of very different characters, are found together in one school, without much attempt at classification. In spite of this and other drawbacks, the industrial schools seem fairly successful in their work of reclaiming wayward children. It is estimated that about 80 per cent of the boys who pass through these schools, do well in after life." (Ellwood, in Henderson's *Modern Methods of Charity*, pp. 211-212.)

Besides the above schools, England supports day industrial schools for wayward children as well as for truants. From these schools they return to their homes after school hours. "They are said to be very successful." (Same, p. 213.)

The work in America may be illustrated by some Chicago institutions. The John Worthy School takes boy criminals and gives them academic schooling and manual training. "In the manual training department practice in wire and iron work, and in bench and lathe work in wood, is given to all of the older boys for one period each day. The younger boys work in raffia paper and cardboard. The work done by the boys in the shop is surprisingly good, and the interest aroused extends to the academic studies, such as arithmetic; for in manual training work they see its practical importance."

In 1901 a printing department was established, and since that time many boys have learned the printing trade. All the printing of the school is done by it. Mr. Sloan, the former

superintendent, stated in one of his reports, that "few of the boys who learned the printer's trade, while in school, were ever recommitted." He said that judging success of the institution by percentages, it benefited the great majority of its inmates, since they were not recommitted. (H. B. Chamberlain in the *Chicago Record-Herald*, April, 1906.)

The Parental, or truant, school, of the same city, embodies about the same viewpoint. It is not a penal institution, nor a reform school, but attempts to be a corrective for bad environments. Judge R. S. Tuthill, one of its promoters, whose work is with juvenile delinquents, says that truancy is the first step towards juvenile criminality; and its friends assert that "as prevention is better than cure, it is better for the city to spend money on a school for training boys in ways leading to an honest, upright manhood, than it is to let these same boys drift along until open defiance of law and authority forces society, in self-defense, to maintain them in expensive penal institutions."

All boys are strictly superintended in play as well as in work. Besides the regular work of public schools, military drill and gymnasium, manual training in various forms is a large part of the training. In summer it is practical farm work. Each boy tills his own piece of ground and learns to get results. Corporal punishment is forbidden. Deprivation of privileges, enforced physical exercise, and solitary confinement are disciplinary means.

As in Elmira, new recruits are placed in the second of three classes, and their conduct decides whether they shall be promoted or degraded. Larger privileges and deserts as well as shortening the time of detention go with promotion. The converse is true of degradation. Good conduct and good

work result in parole for a boy, under which he returns home and remains, provided he attends school.

"The average time of detention at the school is about eight and a half months, the average age of the boys a little over eleven years. During the four years of its existence there have been 881 commitments to the school and 113 returns. During the past year 47 out of 376 paroled boys, or about 12½ per cent, have been recommitted, and in these instances Superintendent McQueary feels that the children had been paroled too soon." (Same, April 4, 1906.)

An object lesson from penology. — We have seen in a few cases of the application of vocational training, together with careful discipline, to wayward and truant children, its efficiency in reclaiming them for society. An even greater object lesson pointing in the same direction is found in the field of penology. The work done at Elmira and other similar reformatories is full of significance for thoughtful educators. It may be well to consider Elmira somewhat in detail to see what the suggestion for education is.

The Elmira Reformatory takes convicts between the ages of 16 and 30. It was established in 1869 by New York state and received its first inmates in 1876; and it first incorporated the indeterminate sentence in 1877. The dominant thought of the institution is to make men fit for citizenship, rather than to inflict revenge or punishment. Qualities of manhood and citizenship being the object, enforced residence in the institution longer than necessary to produce these results would be illogical. Hence, sentences are indeterminate; that is, there is a maximum sentence period beyond which an inmate may not be kept, but proof of complete reformation will lessen the term of service.

Though the sentence be 40 years, if the man conducts himself aright, he may be paroled outside in a year and entirely free in another six months. Longer retention and incarceration than are necessary to make the convict over into a good useful citizen would be irrational and criminal, since reformation and restoration are the ends.

The pedagogical aim of the institution is to make character by establishing "the habits of quick and accurate adjustment to good environment, and the habit of forethought." These are qualities, which being absent in the individual, crime is likely to ensue. The love of liberty is seized on as the motive most powerful to secure these results. Most prisoners will reorganize their habits and establish new and better ones for this motive. A considerable minority, however, require more immediate wants, those which can then and there be satisfied, to impel them to make the effort.

The first want, that of liberty, can be satisfied by a year's good conduct and a half year's parole. The second set of wants find satisfaction through a system of grading and marking. All phases of the life and work of each prisoner are graded. For instance, there are five character grades: 1. Paroled men; 2. Upper first grade; 3. Lower first grade; 4. Second grade; 5. Third grade. On entrance the convict enters the lower first and is given a brown suit. If he shows progress in behavior, school, and trade, he is promoted to the upper first in six months and given a blue suit. With six months more of progress he is paroled and established in free society. If his conduct and industry remain good he is freed in another six months.

But on entering the lower first grade, if behavior and

work are bad, the prisoner goes down to second and wears a red suit. If he continues down to third grade he receives cell life and total isolation. The higher the grade the greater the physical comforts, the better the furnishings, food, service, etc. The reverse is true the lower the grade. These are the immediate satisfactions of the wants which appeal so strongly and help establish hearty activities, habits, and character necessary for eventual freedom.

The agencies used in reclamation, character, and vocation building are essentially three; namely, industrial, intellectual and moral training. Thirty-six trades are taught. Kindergarten (for feeble-minded), primary, intermediate and academic instruction is maintained. Religion and ethics are taught on Sundays. For defectives, to help them get self-control, manual training is supported. Athletics, military drill, and massage bathing are applied and used on needy cases.

The chief instruction is, however, industrial, and, in many workshops with scores or hundreds of workers, both teachers and guards are wholly convicts. In locating newcomers in a trade advantage is taken of ancestral trades as a possible basis of inclination and aptitude; of callings of relatives living, with whom the reformed convict might find a place; and of industries in his home community. Wage-earning and fines have been adopted to further stimulate effort and to inhibit sloth and backwardness.

Conclusion for education. — The results at Elmira are satisfactory and wonderful. Up to 1895 there had been 6641 indeterminate convicts. Of these 4369 were paroled, of which 83 per cent were reported as reformed and 15.7 per cent as probably returned to criminal practice. In the

year ending September 30, 1906, 1016 had been paroled. Of these 348 had served well and earned absolute release, and 530 were serving well, their time of parole having not yet expired, indicating a probable reformation of 86.4 per cent.

Institutions in France, Germany, Spain, and Ireland report like remarkable results. Japan has introduced the system of prison reformation.

Over 80 per cent of reclaimed citizens is a remarkable result. It means a sweeter and more satisfactory life for those reclaimed, a lessened expense to the state, and productive ability added to society.

The point of the treatment is that the chief agent used in this reformation is industrial training, although other good agencies are employed. "In all trades there are definite courses of study, the mastery of which is carefully insisted upon. In this way about 700 hours, or 11 months, is the average time required to learn a trade." This quick mastery is due to the systematic and strenuous instruction given. Well-regulated industrial habits are thus secured which we have seen are lacking in paupers and criminals.

The lesson for education is obvious. "The corner stone of the reformatory system is industrial training. . . . To effect a rounded development, intellectual and moral education is an essential accompaniment of industrial training, and schools of trades must be supplemented by schools of letters." (Eugene Smith, *Amer. Jour. Sociology*, Vol. XI, pp. 94-95.) "I confess that I myself feel that in the century before us our public schools will make it possible for all children to be properly educated, not only in the three R's, but also in the three H's, without first being sent to prison. Why society does not erect similar institutions to

keep our boys and girls out of jail, instead of waiting until they are in prison, I do not explain, for I cannot. There is no school worth while to-day which does not aim, as does this Reformatory, to relate mental and manual endeavor in a happy homogeneity. . . . Education which prevents crime is the education to be desired." (Supt. A. D. Call, *Education*, Vol. 22, pp. 586-603.)

CHAPTER VIII. THE SOCIAL END OF EDUCATION, AND OTHER ENDS

WE have now proceeded far enough to make it plain that the end of education is determined by objective social conditions, rather than by subjective analysis. Before proceeding to a treatment of the methods of socializing education, it may be of interest and advantage to set in comparison and to harmonize, as far as possible, the social end of education presented in this volume, and the other ends of education which have been held, and some of which so largely obtain to-day.

The ends of education which have been held at various times and places in western civilization may be denoted as approximately four. One is perfection, or the harmonious development of all the essential attributes of the individual, as expressed in ideal character. Another is discipline, or training of the powers or faculties of the individual, so that he may be a generally potent, all-round citizen. Culture may be designated as the third type, in the sense of a built-up stock of information largely without reference to application in any particular sphere of experience. The fourth type of purpose has been vocational or wholly practical. Its meaning is apparent. It is pointedly utilitarian.

I. PERFECTION

The idea of perfection. — It will be necessary to examine these various educational aims to discover their strength and weakness relative to the social end. We will deal first with

perfection of the individual. Behind the idea of perfection have been some great names and great schools of thought. It would seem congruous to find such philosophers as Plato and Kant, with their idealistic conceptions, behind the view; but we should not expect to find such utilitarians as John Mill and Herbert Spencer lending it support. Of course, they all differed as to what constituted the perfect individual; yet the idea of perfection, in a general way, was to constitute the goal.

For instance, Mill would make it the general end of education. All influences of every sort, leading to the perfection of our natures, constitute education. But, since this is very broad and general, he restated it as "the culture which each generation properly gives to those who are to be successors, in order to qualify them for at least keeping up and if possible for raising the improvement which has been made." He really falls back on the culture theory with a tincture of utilitarianism.

Herbert Spencer held that satisfactory or complete living is the great problem of life. "The general problem which comprehends every special problem is — the right ruling of conduct in all directions under all circumstances. In what way to treat the body; in what way to treat the mind; in what way to manage our affairs; in what way to bring up a family; in what way to behave as a citizen; in what way to utilize all those sources of happiness which nature supplies; how to use all our faculties to the greatest advantage to ourselves and others; how to live completely? And this being the great needful for us to learn, it is, by consequence, the great thing which education has to teach." (*Education*, p. 30.) In other words, the perfect man is the

man able to live completely. However, the ideal individual is made in conformity to practical social demands. He is to live in a well-known, definite, actual world. Education is the process of shaping or moulding youth like unto this ideal. A rigid censoring of knowledge and subjects of curricula will fit education to accomplish this end.

Kant's perfect individual would be a monstrosity. With all his acumen he seems to have missed the importance of the social in the development of personality. His perfect individual is one possessed of perfect will. A perfect will is one with a reverence for a bare principle of duty. All inclination, feelings, desires, are emasculated. Only such an individual is fit for the kingdom of ends. So education must not train children to meet success in present society, but "in view of a better state, possible in the future, and according to an ideal conception of humanity and of its complete destination."

The idea criticised. — No doubt ideals of perfection must have a large function in all formulas of education. We shall always find an ideally perfect man of our way of thinking, hovering high up, or in the background of our thought. Yet the system or teacher who states the purpose of education for life in those terms is open to valid criticism.

In the first place, it is too general and abstract to meet most useful and fundamental purposes of life. Mill felt this and limited his conception for practical purposes to culture. Spencer, with all his love for the concrete and actual, was nevertheless so much an individualist in his social philosophy, that he generalized his individual and elevated him to be the goal of education. Regarding the perfect man of Kant,

one able to obey the mere principle of duty from profound reverence, even the philosopher himself was skeptical as to whether he would ever materialize.

Perfection is relative. Ideas of perfection are products of particular epochs, classes, nations, and civilizations. The perfect man of Greece and of Rome differed as much from each other as that of the mediæval church, in its monastic bias, differs from the ideally perfect man of America, England, Japan, or any modern European nation. The idea of perfection which is projected high above the earth, defies the demands of relativity, and attempts to serve for Japan, Europe and America, equally well, is fit only for a museum of intellectual monstrosities or to serve for a goal of leisure class education.

In the second place, a practical difficulty has always arisen, when such a general end is accepted, in constructing a program of studies to realize it. It is the historical problem of the "what" and "when" of curriculum. Every educational objective presents a problematical wilderness here. Nevertheless, every such general end doubles the difficulty by pouring a flood into the wilderness. For the idea of perfection has usually been obtained by generalization upon generalization, forming a way which is unattainable or impossible to the plain man. It has been hard to get up to that eminence, even in its logical establishment. But when a series of subjects have to be found, measured, criticised, which are the best of all possible subjects and just the very proper ones to be pursued by the individual to elevate him to this sublime height; and all others are to be rejected because they do not contain the magic virtues, there is a task before which even that of Hercules seems trivial.

Financing a billion dollar trust or refunding a national debt is a slight mental task in comparison.

But the notion of perfection as an educational ideal possesses elements of value. However, it must be established in terms of real society, that is, made to obtain its content from an inductive study of the actual world. In doing this, we would probably first conceive an ideal society; that is, a society consisting of all its parts working harmoniously together, so that all persons in all the parts are justly served.

But, second, since society is diversified, possessed of many functions, and since these functions are exercised by structures, set aside for just those purposes, individuals are classified into working groups, each group possessing a knowledge and skill peculiar to its structural function. When we come to form our ideal for the individual, therefore, it is for A functioning as banker; B functioning as farmer; C functioning as bricklayer; D functioning as printer, etc. Each one's knowledge, character, citizenship, are wrapped up with his vocational function.

The banker cannot be a perfect man nor approximate the perfect man if he is a poor or a dishonest banker. The same statement can be made of every other calling. All may and do have some things in common, for which a common ideal training could be provided. But a great part of their training must be different to meet their special callings. Consequently we have *ideals* and *ends*, when we come to educate them, rather than just one ideal and end. This seems to me to be the part perfection, as an idea, would play in educational philosophy; just to furnish quite specialized ideals or copies of men who are to work in the various walks of life.

II. DISCIPLINE

Meaning of discipline as end. — Discipline as an end of education is apt to be only less general, abstract, and socially unfit than perfection. Special discipline, or discipline for specific ends, is always legitimate and valuable. When such objective has been maintained it has generally been industrial or professional.

It is the idea of general discipline which is here considered. This is assumed to be the proper goal of all training and the program is made up of subjects which are supposed to be particularly well qualified to have a place because of their disciplinary value. It is assumed that general characteristics are a fit and full equipment for particular conditions of life, that there is power in general and universal ability for adjustment purposes. This kind of individual consists of certain essential qualities or powers. Moral probity, intellectual acumen, logical power, stability, and more, have been held to be some of the essential elements in this educational aim. Many have talked of a good general education to be followed by a special training as the complete educational arrangement. The first develops the general, and the second gives the specific.

Possibility of general discipline. — Perhaps no one who has reflected much about this matter would affirm that there is not a rather general ability and power developed under the sway of experience. A great many people have great practical wisdom and are able to turn their hands to a number of things as a consequence of having had experience in the several lines. Men of great education, who have been long in student life and have covered several groups

of subjects in a quite special manner, are possessed of ability to work fruitfully in any one of several lines. They also may have, and should have, developed a body of principles which would enable them to enter some department of business management and in a relatively short time prove measurably efficient there. Such a person would have developed a power to grasp situations, to construct imaginatively conditions in advance, and to respond elastically to mental requirements. But it would require long experience to develop the needed feeling of familiarity in the business which is the note of confidence and success in a large way; and a person too long in assimilative vocations, as so general a student would have to be, would quite likely have passed the age when that initiative, so needful to practical success, could be generated.

The genius is about the only other individual who could be generally potent; and the nature of genius is to defy special programmes of study, to absorb that which suits its bent and ignore the rest. Perhaps the leisure class might be made available for the general end of training. Their financial sufficiency would render them independent of the stern necessity to be immediately useful; and their abundance of time would make possible that length and breadth of study by which general ability might be reservoired.

However, when we contemplate an educational system, programme or process for community purposes, we cannot consider these special cases. We have to deal with the conditions of the *masses*, as to their needs and possibilities. It is with this factor in plain view that we speak.

General discipline psychologically untrue.—There is little or no psychological justification for the assertion that the

average child may receive a general discipline by school training. If some of the contributions of modern psychology are called into requisition and render their testimony, they will assert with almost the force of mathematical demonstration that we know nothing of mind in general. Consciousness is always particular in its functioning. It has no general powers but is built up and is constituted of specific abilities.

The illuminating *apperceptive theory* of conscious growth evidences that we build up new knowledge, make all our further acquisitions by means of the old. The categories of knowledge are viewed as apperceptive groups in consciousness. The mind, in development, in order to expand and grow, becomes organized in various directions. Each kind of knowledge, or line of development, constitutes an apperceptive group. In order to expand more and to develop further, the expansion and development must take place in and by means of these groups. The old knowledge forms the basis of apprehending the new. But the old is made of a special line of facts; and this special line determines what the new shall be and how it is lodged.

All biases, prejudices and specialties are lodged here. An Old Two-seed-in-the-Spirit-Predestinarian Baptist cannot drink at the fountain of Unitarianism. A conservative Republican or Democrat is unable, perforce, to sympathize with or to apprehend developing socialistic doctrines and programs. A man who has been trained, specialized for years, in natural science, and who then invades the realm of subjective sciences to write or speak with authority, usually provokes to action the risibility of those who are versed in the latter. He does not know because he does

not comprehend the nature of the knowledge in the new field.

Or should we draw upon the *doctrine of memory types* we should reach the same conclusion: that functions and knowledges are specific and specialized; that we have no power developed which is equally strong and serviceable all around. The dominant memory types are named for the special senses, whose images constitute the reproductive process. Undoubtedly the majority of persons are visualizers, because the eyes, of all the sense organs, are the most responsively adjustable to demands. We use them most, and at length come to convert other sense impressions into sight images for reproductive purposes. Yet there are auditory types of memory, in those who reproduce their experiences by means of sound images; and motor types in those who reproduce in muscle images.

In part, of course, the type may be determined by heredity. Natively, one is constituted so as to be more responsive to one kind of reproduction and builds on that basis. This would likely be true of a musical genius who is able to hear over again an entire orchestral programme; or of a painter who holds, in mind form, perspective, location, shades, blendings, etc., of the various great pictures and landscapes he has seen.

But most of the types are formed and built up by use, in special directions, by perpetually calling on one kind of function for service. Thus, the mail clerk can "throw" any box or bag in the dark; the ticket agent at once reaches the ticket, among thousands, that will carry you to Three Rivers or San Jose, and can state the fare instantly; the wine taster immediately names the exact brand of vintage

of each of hundreds of kinds of wine by the special shade of flavor. Each has trained his particular kind of function and the consequent reproduction is in line with it.

Dr. W. C. Bagley reviews the experiments made by various psychologists to ascertain if there is such an effect as general discipline, and concludes: "The very decided trend of all the experimental evidence seems to indicate that the theoretical impossibility of a generalized habit — either 'marginal' or subconscious — is thoroughly substantiated by accurate tests. There still remains, however, the widespread notion that formal training is generalized; and whatever cases may be adduced stand against the evidence from experiment."

Professor Thorndike disposes of such cases in three ways: (1) Where specific training is thought to spread out and effect other functions, it may simply mean that the individual in whom this tendency seems to be evinced is really inherently more capable than the average; therefore, if he shows particular aptitude for the study of Latin, he may later excel in Greek, not because the pursuit of Latin has necessarily improved the functions that operate in the study of Greek, but because the individual is "bound" to excel in anything. (2) Certain effects commonly attributed to discipline are really due to "mere inner growth and maturity." (3) Educators tend to judge all children on the basis of their own childhood, a fallacious procedure, because educators are likely to be gifted individuals who could as boys and girls readily acquire and apply general ideas and habits. (*The Educative Process*, pp. 208-9).

In practical matters there appears to be no common memory. We all work in grooves. A man has ever so

good a memory for his line of facts, — say it is historical facts for his teaching work, — and yet immediately forgets the name of the person to whom he is introduced. He is able to recall historical names, but does not remember the names of his last term's classes. The grocery man knows all his goods and prices, but forgets what his wife ordered him to send for dinner. The entrepreneur assimilates all sorts of prices, events and movements which affect his business; but his mind is not retentive of facts which have no perceptible relation to his line of work. Almost all teachers have commented on many students who have good abilities in one line but poor in another. That is, reproductive forms were specialized for them.

Professor Bolton writes that James and other psychologists have shown "that long practice in memorizing things of one kind in no way aids memory for totally different things. Even long attention to memorizing poetic writing does not assist much if any in the memorizing of prose. Still less would the poetry assist in the memorizing of chemical names and geological specimens." (*School Review*, XII, 170.)

Disadvantage of traditional education. — All this means that the subject matter of training is of great consequence in this way. We remember, so as to reproduce for use for the best results, those things which are in line with our interests; or, in other words, facts which are so organized and related within themselves and to our mental inclinations, that our heartiest attention and efforts are elicited. Our reproductive ability, or skill to use, which constitutes our working capital, or our "power" in future, depends on this specialization. If a line of study is pursued which absorbs the interest and which is organized within itself

and in relation to the self, and yet which is not organically related to the world in which the individual is to work, the individual so trained is at a double disadvantage. He is compelled to wrench his interests, so as to turn them in a new direction, which is psychically a difficult and sometimes impossible thing to do; and, again, he is compelled to become acquainted with a new body of facts, the ones which he is to use in his business of life, and this is practically an exceedingly difficult undertaking. Such an unnatural training would be one which was dominantly classical and mathematical.

A comprehensive scientific consideration of the modern situation must demonstrate how fundamentally anachronistic is the retention of the traditional culture studies, as fully preparatory to life in the present age. We have developed the thought of the specialized nature of the world on its social organization side. We have given evidence in previous pages of the economic and scientific spirit of our times. Just here we may be permitted to supplement that previous treatment, regarding the scientific essence of civilization, in the way of a quotation from Professor Veblin.

Our civilization has its apex in its capability of "an impersonal, dispassionate insight into the material facts with which man has to deal. . . . Compared with this trait the rest of what is comprised in the cultural scheme is adventitious, or at the best it is a by-product of this hard-headed apprehension of facts."

"A civilization which is dominated by this matter-of-fact insight must prevail against any cultural scheme that lacks this element. This characteristic of western civilization comes to a head in modern science, and it finds its highest

material expression in the technology of the machine industry. In these things modern culture is creative and self-reliant; and these being given, the rest of what may seem characteristic in western civilization follows by easy consequences. The cultural structure clusters about this body of matter-of-fact knowledge as its substantial core. Whatever is not consonant with these opaque creations of science is an intrusive feature in the modern scheme, borrowed or standing over from the barbarian past." (T. Veblin, "The Place of Science in Modern Civilization," *Amer. Jour. Sociology*, March, 1906, p. 585.)

If, therefore, discipline must have some sort of a regard for the useful in life, in order to qualify as discipline, if studies and training must seek to get at the gist, the essential nature, of the things that are uppermost now, in order to be accounted truly disciplinary, it would appear that purely traditional culture should have a minor place in education.

The demands of the social theory of education. — The insistence of the social theory of education would be upon particular disciplines. It seeks to show that the educational programme should be made to meet the demands of the world as it is now constituted. It believes in character, power, etc., and also thinks that discipline is the fit means to produce them.

But there can be no superiority of one kind of programme, as begetting discipline and power, over another. One line of study, and any line that is far enough developed to be organized as a science, contains equally good details and organizing principles with every other for disciplinary purposes. One set of facts, so long as interest is present,

is equal to any other as a field in which to exercise observation, comparison and critical discrimination. To pursue subjects which are both disciplinary and useful is to get double value over following those which are alone disciplinary. If two curricula were supposed, one merely disciplinary, that is, a power generator in general, and the other both disciplinary and specializing in nature, and the two were nearly balanced in respect to their disciplinary powers, then one should choose the curriculum which offered discipline plus special knowledge of present things, since he would be obtaining double value for his time, as compared with the other course.

Education needs to get rid of the aristocratic notion of discipline, that a certain set of studies is more fit than others. Bain tried hard to show that language, natural science, and mathematics alone possessed true disciplinary value. The practical studies, economics, ethics, politics, etc., he discounted, because not exact enough sciences. On the same basis, one should have to deny disciplinary virtue to life experiences and world affairs, because life and business are not exact sciences. Most subjects formerly got into our courses of study because of their use for specific ends. Later on, when the contingent ends had passed away, they were retained on the plea of greater disciplinary value. Latin, for example, was the language of the civilized and scholarly world when it was placed in the schools of Europe, but it has long since been displaced in that capacity. Really, they have been retained for the same reason that the Chinese have for centuries, until recently, made civil service candidates pass examination in their mythical literature, exclusively.

III. CULTURE

Meaning of culture. — Culture has been closely associated with discipline as an educational view. What was said under discipline will hold of culture, in so far as the two sets of ideas are identified. For purposes of clearness it will be advantageous to treat culture separately.

There are a number of meanings of the term. In social evolution it stands for a grade of civilization. The various stages of civilization are said to be culture stages. Thus we have the savage, the barbarous, the semi-civilized and the civilized. Here it means all the institutions, ideas, customs, inventions, etc., peculiar to a given social grade.

The Germans make culture a social matter. It is "a condition or achievement possessed by society. It is not individual." It is not the same as civilization. "Civilization is the ennobling, the increased control of the elementary *human* impulses by society. Culture, on the other hand, is the control of nature by science and art." (Small, *General Sociology*, p. 59.)

In America, there is a use which identifies culture with the total spiritual content of a community or nation, leaving out the agencies by means of which it is carried on or secured. For example, following this usage, I once published an investigation entitled "Culture Agencies of a Typical Manufacturing Group," in which I treated schools, churches, libraries, newspapers, social and study clubs, recreational agencies, and so on; in fact everything which seemed to make for spiritual improvement.

It is well to have these meanings before us in discussing culture as an educational end. The latter throws the emphasis on culture as an individual matter. It dissociates,

or largely so, the intellectual stock of the one educated from the idea of the need of articulation with the world.

In current usage there are clearly two meanings of culture education. One set of people think of culture as polite information. As in mediæval Italy learning was esteemed as a note of class standing, because it gave advantageous status, so many persons to-day think of the schools as places where reputable information may be obtained. With them education is a social badge. It is the conference of the memory of names, mythologies, dates, books, and so on, which all supposedly educated people must have or be classed as vulgar. For instance, classical education in the southern states, even until quite recently, was held to be a gentleman's course. Practical studies were looked upon as degrading. Many of our classical schools are still under this bias. And Booker T. Washington tells that the negroes, who come to Tuskegee, are prone to desire to pursue the study of Latin and Greek so they will not have to work.

The other meaning given culture in education is broader. It is the idea of general information. Education should yield universal knowledge. The schools should turn out people who "know something about everything." There is little attention bestowed on the fitness of knowledge, because, evidently, it would be out of place where general information was to be secured.

But this view is not so broad as it seems. What has really been done is to supplant a traditional subject or two with one or two more modern. Students cannot take everything. So they follow custom in selecting the things they do take. Instead of discovering what their function in society will be, and organizing their studies so as to yield

the best equipment with the time at their disposal, they "go it blind." This is the situation of the bulk of boys and girls in high schools and colleges.

✓ In either case culture is a *state of mind* which the individual is to get into. It is the possession of a stock of knowledge. It is *individualistic and without a social bearing*. If it is a preparation for something, they know not what.

Place of culture or intelligence in race evolution. — In order to examine this theory we must fall back on race history, must have recourse to our biological and psychological sciences in their genetic aspects, that we may discover what function intelligence or culture has exercised for the individual in the evolutionary process.

There we find that what we call life has been a functioning in a totality of conditions; or a series of adjustments or adaptations to a concrete, varying, and more or less varied environment. We are not concerned with what life may be ultimately. Biologically, the total life of any being, human or sub-human, seems to be about what Spencer called it — a series of adjustments of the internal to the external.

In order to sustain the validity, integrity and welfare of the organism, let us say, the structure must adapt itself to the conditions which exist in any given place and time. As life has emerged from being localized, tied down to one mere spot with relatively changeless conditions, and has become locomotive, it has met a wider circle of elements and therefore become subject to certain changing, variable factors which have to be met. Again, as life has developed into a social existence, where coöperation and long distance relations are sustained, the number of elements have multiplied

rapidly; and the variableness and uncertainty of circumstances have consequently likewise increased.

Now, it is conceivable that life could meet these changing conditions in either of two ways. By transforming the physical organism, on the one hand, as rapidly as the external conditions changed in order to fit into them. Evidently this would be impossible and destructive to the integrity of the physical mechanism. On the other hand, it would be possible to invent ways of meeting or circumventing the kaleidoscopic variability impinging and threatening the integrity of the organism.

This was the method followed. The permanent factors in the environment were picked out, and automatic machinery provided to meet them, as they occurred. All the automatisms and reflexes of the motor system met the permanent and comparatively changeless demands of life. But new things arising, new conditions entering, were met by a growing complexity of brain, on the physical side; by an ever heightening consciousness or rational nature, on the side of mentality. Thus was developed the factor of pre-science, or anticipation, in behalf of life adjustments. The most fit are those beings which are able to see what will next "turn up" in the world, and be ready to meet it. Hence the *function of intelligence is that of adaptation of life interests to conditions as they arise*. It has its greatest work in approximating what the total conditions will be from time to time, what is the trend of affairs, what the great social stream is going to demand next; and setting to work to fit its human individual for the anticipated conditions.

This has double bearing. It bears on the function of intelligence, or culture; and likewise on the kind of knowl-

edge which should enter in to constitute this culture. It shows that to set up culture, as an end, is the reverse of the demand which the development process has hitherto placed upon it. It has demanded it should be a means to an end. Life is the end. Intelligence is a fit instrument to subserve that end. As a state to get into, consequently, it is valueless in and for itself.

Culture must therefore wear a special aspect and look towards some life service. Since this is true we have the quality or kind of knowledge prescribed for us which should chiefly enter into the make-up of culture. It will be a knowledge of matters which most directly bear on life adjustments, or we may say, present actual social adjustments. Those things should be obtained first in training which most directly furnish this accommodating ability. About that as a nucleus or core of education would be arranged other less and less direct elements in widening concentric circles.

Non-traditional education meets the essentials of culture.

—If we could catch society at the task of making an educational system when it was closest to the natural and least conscious of the artificial and conventional, we should find that the scheme of training thus worked out was framed to meet the essential points of that society's culture-stage. We notice how true this is of natural peoples. "The aborigines of North America had their own system of education, through which the young were instructed in their coming labors and obligations, embracing not only the whole round of economic pursuits — hunting, fishing, handicraft, agriculture, and household work — but speech, fine art, customs, etiquette, social obligations, and tribal

lore. By unconscious absorption and by constant inculcation, the boy and girl became the accomplished man and woman. Motives of pride and shame, the stimulus of flattery or disparagement, wrought constantly upon the child, male or female, who was the charge, not of the parents and grandparents alone, but of the whole tribe. . . . The Eskimos were most careful in teaching their girls and boys, setting them difficult problems in canoeing, sledding, and hunting, showing them how to solve them, and asking boys how they would meet a given emergency. Everywhere there was the closest association, for education, of parents with children, who learned the names and uses of things in nature. At a tender age they played at serious business, girls attending to household duties, boys following men's pursuits. Children were furnished with appropriate toys; they became little basket makers, weavers, potters, water carriers, cooks, archers, stone workers, watchers of crops and flocks, the range of instruction being limited only by tribal custom. Personal responsibilities were laid on them, and they were stimulated by the tribal law of personal property, which was inviolable. . . .

"The Apache boy had for pedagogues his father and grandfather, who began early to teach him counting, to run on level ground, then up and down hill, to break branches from trees, to jump into cold water, and to race, the whole training tending to make him skillful, strong and fearless. The girl was trained in part by her grandmother, the discipline beginning as soon as the child could control its movements, but never becoming regular or severe. It consisted in rising early, carrying water, helping about the home, cooking and minding the children. At six the little girl

took her lessons in basketry with yucca leaves. Later on decorated baskets, saddle-bags, bead-work, and dress were her care." (*Handbook of American Indians*, U. S. Bureau Ethnology, Vol. I, pp. 414-415.)

Sparta is an example, in ancient times, of a primitive group of the military type whose culture consisted in beliefs, customs, and the practical arts of war and government. The training of the youths followed rigidly the lines of its peculiar type of culture, consisting almost exclusively in the severe discipline of the military camp and imposing the predatory virtues of conquerors and plunderers.

Athens presented quite a different type. While resting on the economic basis of slavery, it was much more of an industrial and commercial people than Sparta. There was a larger need of intelligence for the supervision of business than in the case of Sparta. Slavery furnished leisure for the Athenians. Commerce enriched the city and furnished the means of creating the monuments of architecture and art which made it famous. To satisfy and fill in the leisure of the ruling class, amusements, recreation, theaters, schools, were established. The males were educated to carry on the government, to speak and write the language so as to enjoy its intellectual life, were given arithmetic for business purposes, and athletics for health and for participation in competitive games. The training was adapted to the extant culture and to fit a leisure class race for its governing place.

The distinctive society of feudal times likewise exemplifies the coupling and articulating of the training given the youth with the kind of culture which the ruling group appreciated and dealt in. The training did not attempt to give

all the culture of the times, but the essential phases which were entwined with the peculiar life of the ruling class. The central feature of the life of the ruling class was chivalry, standing as it did for the whole institution of knighthood. Every consequential feudal lord was surrounded by a social court. This court was made up of his chief vassals.

The schooling of the sons of the vassals took place in this court. They were to become knights, to further knighthood, and their training was directed to this end. In the first stage the boy led the life of a page. His chief attention was given to instruction by the mistress of the castle, who taught him obedience, courtesy, and the duties of knights to ladies and religion. Besides this, he received instruction in the use of light arms. After fourteen, he was promoted to being a squire. In this period of six years he served the lord of the castle, attended him in a personal way, arming him for battle, going with him to war, and looking after his safety and welfare. At about twenty, he was knighted with imposing ceremonies and thus was graduated into knighthood.

In all these cases, it will be noticed that the essential functions and services which the life conditions of the group imposed on its members were singled out and made points of attack in the scheme of training. Not merely the traditional ideas were involved, but much more the practical arts and utilities of the group, in its struggle for existence, were grounded in the developing members.

The practical lesson for us in these allusions to more primitive groups consists in the *principle of their procedure*: that of keeping in mind the specific services and labors the young were to assume and centering their training on

those objects. That schooling was not merely mental, it was functional. It was not only moralizing, but specializing in view of the needs of the simple life.

This lesson has its application for us. With our big, many-sided life and complicated social mechanism, it is not so easy as in primitive society to locate the essential traits of our grade of culture. The whole sum of our culture is enormous. No one mind can comprehend it in its details and fullness, were a whole life set aside to the task. Much more, it is seen to be absurd that our common schools should attempt to convey it.

But there is evidently the possibility of discovering the principle or principles on which the mechanism which differentiates our age from preceding ages rests, and of embodying those principles as the common basis of our educational system. Beyond these principles, we must look to the callings and the vocations which the boys and girls are to adopt, and must fit our training scheme to give preparation for them. Both phases represent essential culture elements, essential to our peculiar kind of civilization. The principles of science rest under our industrial mechanism, and its further progress depends on the wide diffusion of science. The industrial and professional callings offer the technical elements which must be possessed before the individual is ready to actually articulate with working conditions and function productively in society. The kind of culture needed in education has already been developed in the chapter on democracy.

General culture impracticable for the masses. — If we have in mind the high and broad meaning of culture, — knowledge about everything, — it is evidently impracticable

to attempt to make the schools bestow it upon the great common people. It has previously been remarked that the contents and subject matter of our present civilization are too vast for even an able individual to absorb in a lifetime of study. Were it possible for a man to attain it, it would require years and years of schooling which only a few favored individuals could afford to give. The ninety and nine of our population have to make their own way, and their schooling is necessarily brief. Moreover, as we have seen, 50 per cent or more of our children actually leave school before they reach the sixth grade. Probably no more than 10 to 20 per cent finish the elementary schools. Certainly in view of this situation, the bestowal of anything like culture upon the masses is out of the question, at least so long as conditions remain as they are. As was suggested before, a high-school training, at least, would be requisite for gaining even the general principles of the more needed sciences.

Further, culture for the sake of culture has historically yielded little. When the classics were at their height the world was fullest of bigotry and superstition. The Renaissance was the establishment of the rational, the breaking away from form to matter. Also, classical culture at present seems to be negative in value. Professor Thorndike investigated how much culture students of classics possess. The results showed surprising ignorance of the simplest historical facts which might be expected would be gained. He concluded that the average high-school student was liable to be misinformed rather than instructed.

On the emptiness and vanity of mere culture for culture's sake, Dr. J. B. Angell, President of Michigan University,

has pithily spoken in his baccalaureate address, 1904. "The world is full of learned fools. There is an endless variety of them. Some are vain and chattering pedants, who fill the world with noisy clamor like a company of crows over their quidities and odds and ends of knowledge. I recall men of capacious memories, who with the utmost ease and complacency swallowed all the learning which could be fed out to them by a whole college faculty, but the learning never got out through their nerves, or their tongues, or even through their muscles to touch and stir the world."

There is now no room for intellectual jugglers or mental gymnasts, as those for the most part are who pursue science for science's sake or seek culture because of culture in itself. Professor Cattell recently wrote that he doubts if interests in pure science should precede interests in practical or applied science. He even indicated that if he thought his work as psychologist was on the basis of the former, he should feel more akin to the sword swallower and sleight-of-hand performer than to the business man.

In a speech before Princeton men in Chicago a short time ago, President Wilson, of Princeton University, depreciated mere learning for learning's sake. "We want," he said, "useful men, not men who have learning for learning's sake, and who think they are better than others because they have something in their heads which is useless. . . . I do not believe that the natural carnal man was meant to sit down and read a book. I myself would rather see things than find them out from a printed book."

CHAPTER IX. STATE EDUCATION AND RELIGION

It would be very difficult to conceive of a treatment of the educational programme, in anything like a large way, without some attention being given the subject of religion. The reasons which could be found for bestowing this notice upon it would certainly be very numerous. It is not necessary to catalogue them.

The motive of this chapter is not to depreciate the good which ecclesiastical institutions have wrought, nor to forget the good which religious forces and sanctions legitimately used may do. But it is logically possible to esteem the place and service of religion, to hold in regard the ecclesiastical institutions as agencies in social control, and yet to maintain that there are certain other institutions which shall be kept free and inviolate from direct religious teaching and ecclesiastical interference. Some of the reasons for this position will be developed in this chapter.

I do not feel called upon to discuss extensively the ultimate nature of religion, its origin, or how it comes to be a part of the life of the average man. Undoubtedly such a broad discussion would have its value for educational purposes, but the questions it would raise would demand entirely too extensive a treatment in order to be effective. It seems advisable that our treatment should center on two points, first, a discrimination between morality and religion, as necessary to a fair conception of the problem of placing religion in the schools; and second, the question of expediency as seen in the historic connections of state and church.

I. RELIGION AND MORALITY

Distinction between religion and morals. — In my estimation the largest source of difference of opinion, among people, as to whether religion should or should not be taught in the schools, lies in confusing two sets of facts in our lives, which, scientifically, at least, are separable and distinct in origin and nature. It is common to identify morals and religion, in using one or the other term, making the term used cover both sets of facts. It is found that quite generally, when religion is mentioned, morality is in the mind of the speaker.

I have in mind a very recent illustration of this. A group of six educators, as a state committee, were considering what subjects should enter into the course of study in the schools. There was fair unanimity until the subject of religion arose. At once the group split evenly. A warm discussion ensued. Finally, the suggestion was made that the term be defined. It was found that but two, possibly three, conceived morality and religion as distinct phenomena. It was also found that those who did not so distinguish were thinking of morality under the term religion, save in one case. The exception alone would have religion, as distinct from morality, placed in the schools; and he ultimately abandoned his position in favor of the argument of expediency.

I shall proceed to the attempt to distinguish between morality and religion. Perhaps the best way to clear up the difference between them is to make a brief sketch of their origin and early development.

Men who devote themselves to the study of primitive society are in the habit of making the distinction and of

drawing it clearly. It is their business to give us a scientific account of the origin and development of ideas and institutions. The consensus of the opinions of these men is that in developing into human beings social groups were formed. Original man had to evolve all his ideas, language, customs, institutions. In the beginning he was without religious ideas as he was without other ideas. Thus, living in groups, ways of associating grew up. These forms became customary. This was the beginning of the social order. It was also the beginning of the moral order. It was safety to hold together as a group. It was social safety to refrain from certain acts like theft, murder, etc. Such acts would destroy society. Hence they were wrong. To promote social welfare was right. Hence custom grew into a moral order.

As men grew in intelligence, they began to explain things, or try to. They began to be struck with certain occurrences, such as shadows which come and go, reflections of themselves and objects in the water, dreams in which they went to distant places and had strange experiences, echoes which duplicated their voices, etc. Knowing no science they came to believe all these things were evidences of another self, a self that could come and go. And they came to think this was the self that made this body do things, the active agent. By extension, all the actions of nature, such as storms, lightning, earthquakes, diseases, poisons, etc., had their explanation in the same manner. Everything was dual. Objects were filled with unseen agents or demons which worked through them, or only at times used them as tools.

It was natural and logical, when this stage was reached, that men should try to appease the demons which might

injure them. We know that primitive man lived in constant fear of the gods. It takes him a long time to elevate the gods into objects to be adored and worshipped. A set of specialists, at first medicine men or necromancers, later priests, were developed to control the spirits. It was their business. They were the mediators. They were supposed to know the way of the gods and to be able to pacify them. This was religion. It was the way religion began, the way the ideas and practices took root.

In the ordinary unfolding of things the medicine men and the priests discovered that they could use their positions as powerful means for controlling the conduct of men. To have the gods condemn or approve certain lines of social relations or conduct was a sure way to secure the kind of action desired. Hence it became common to designate moral actions as sanctioned by the gods; and immoral and anti-social, as disapproved. Thus it is seen that religious sanctions came to be used to reinforce formerly moral or social sanctions. This makes plain why the two came to be identified so closely. When the higher religions emerged, built as they were on the lower, they naturally continued the practice of identification. But by tracing the origin and development of both the moral and religious orders in the early stages of society, we are able to distinguish between them quite clearly. It also helps us to perceive that the very center of religion is a sense of consciousness of super-human agencies.

In so far as morality is identified with religion, the scope of religion is widened and its influence in human society is thereby made greater. But we must remember, in this case, that we are confusing two things which we are able to

separate intellectually; and that we are imputing to one of these sets of phenomena attributes and characteristics which belong to the other only. So Benjamin Kid could claim that altruistic actions in society could have no rational sanction, since, in his conception, the human individual is rational when he is completely selfish, and that hence moral actions must be impelled by ultra-rational sanctions, that is, religious sanctions. But his conception of the psychology of man and organized society was a grotesque caricature, having no standing whatever among scientists. It is confusing to couple morality and religion and label them religion. We can account for the moral attributes of men and for their ethical actions without having recourse to religious explanations. What psychologists, moral philosophers, sociologists, and historians of religion do as scientific necessity should be our guide when we come to consider religion in its relation to education.

Hence it is one thing to teach religion and another thing to teach morality. Religious teaching is bound up with a peculiar conception of the universe, and of man's relation to that universe and to the infinite personality working in it. Moral teaching is based on social conduct, on relations between men; and morality flows naturally out of ideals of actions which we think should be realized among men.

Jesus was a religious teacher in so far as he gave his philosophy of life, of the world, in relation to God. He was an ethical teacher when he discoursed on the relation, rights and duties of man to man. His ethical teachings are not true just because he stated them. He stated certain things because they were true in the nature of things. (They had been said before by Jewish teachers.) They had

been evolved out of social strivings and experiments. They have been evolved by other social groups in widely separated places, and have been stated by other teachers entirely independent of Jewish influences.

The conclusion is, therefore, that it is possible to teach morality, to make children moral, without having recourse to the teaching of religion in the schools. Under the treatment of moralization will be found some suggestions about how this work of moralization may be done. Our schools are constantly moralizing the young without direct religious teaching. And the marvelous results attained by such experiments as Miss Brownlee's demonstrate how much more could be accomplished if only our teachers were enlightened as to true methods of teaching. (See Brownlee, *Method of Child's Training*, Holden, Springfield, Mass., a pamphlet for 10 cents, explaining the system.) Whether or not religion shall be taught in the public schools must be settled on grounds of expediency and justice.

II. PRESENT PRACTICAL DIFFICULTIES

Views on relation of school and religion. — There are three clearly definable views on the relation of public schools to religious teaching. One is that the province of the state, organized as government, is entirely secular. Since it is to serve all individuals of all shades of belief it must maintain absolute neutrality towards all forms of belief and unbelief. If it teaches a particular form of belief, it discriminates against other forms and, hence, is unjust to those classes of its citizens which hold them.

A second view is that entertained popularly by Christians, that the safety of the state depends on moral education, and

that this cannot be inculcated apart from religion. Thus Judge Story wrote: "Why does the state take money from your pocket to educate my child? Not on the ground that education is a good thing for him, but on the ground that his ignorance would be dangerous to the state. In like manner the state must teach in its schools fundamental religious truths; not because the child should know them in preparation for a future existence — the state is not concerned with the eternal welfare of its citizens — but because immorality is perilous to the state, and popular morality cannot be secured without the sanctions of religion." (*Commentaries on the Constitution of the United States*, Boston, 1883, p. 680.)

A third position is that of Roman Catholics, some Anglicans, Lutherans, and others. It holds that while, of course, morality is necessary to the safety of the state, morality cannot be taught except by giving the definite religious teaching of their respective churches. Pope Pius IX said it is an error that "This system of instructing youths (the public school) which consists in separating it from the Catholic Church and from the power of the Church . . . may be approved by the Catholics." A Catholic bishop said in Boston, "The state has no right to educate, and when the state undertakes the work of education it is usurping the powers of the Church." In the encyclical of 1908 the Pope permits Catholics to send their children to public schools but puts a ban on "modernism."

Naturally, with such diverse positions, compromises have been made. Sometimes representatives of the various faiths have been allowed to teach the children of their communion in the public schools. None of these com-

promises are satisfactory. Deep and bitter feeling exists and often breaks out; as in the case of the A. P. A. of the United States, the religious education trouble in Manitoba, and the rebellion of the non-conformists of England against the Balfour Education Bill passed by Parliament. Generally, in the United States, the parochial schools system is resorted to by those who do not believe in state education. The following remarks on this plan are worth reproducing.

“But even if the verdict be that they are so, the question still remains whether the church, by devoting the same energy and resources entirely to religious teaching, leaving instruction on ordinary branches to the public schools, might not have accomplished as much for the children now in parochial schools, and, in addition, have reached also the greater number of its children still in the public schools whom the parochial school does not reach; and whether it might not at the same time have lowered instead of raising those barriers of prejudice for which the Catholic people are not wholly responsible, but which it is their duty, as well as that of all other good citizens, to remove. The expenditure which has established and maintained these schools would, in the same communities, have built and manned a chapel in the vicinity of every considerable public school. The same number of instructors that can teach a thousand children five hours a day could teach five thousand one hour a day.” (*School Review*, Vol. XIII, p. 673.)

Religious organizations could not agree on teaching. — The decision could not be made certain or definite, if the question of what to put in the schools in matters of religion were left to the churches or ecclesiastical organizations.

There is in America a diversity of religions in the first place. Not only it is Jew and Gentile, but of the Gentiles the faiths are diverse.

Of the Christians there are diverse bodies of believers holding the old historic faith, and not a few a new: such as Christian Scientists, Zionists, Flying Rollers, etc. Old line Christianity is severely divided and broken; not only are there Catholic and Protestant, but of the latter there are many different denominations with differing doctrinal bases; and the great denominations are broken into multitudinous sects, some having as many as a dozen or more such sects.

As far as Catholics and Protestants are concerned there never has been, and seemingly will not soon be, any agreement in theological views so as to permit of doctrinal instruction. Moreover, their views with reference to the use which should be made of the Bible in popular instruction are so divergent that there is little hope of finding unanimity. First, doctrinal instruction is barred out by this disagreement. Second, Catholics would withhold the Bible from use in schools where any but teachers of their faith could regulate its reading and possible interpretation.

But if the Bible is not to be interpreted to the average public school pupil, exceedingly little of the meaning will be gained, and little or no interest and attention given to the public reading. I tested this at various times in my own classes in institutions where the Bible was read, but usually not interpreted. I have asked classes, whose members numbered from fifteen to forty pupils, for the Bible passage of that morning's reading. Seldom have any known the subject, and several times not one could suggest an idea or phrase read on that day. And many of these

students were of college rank, were intelligent, and most of them were church members. They readily acknowledged that they seldom, if ever, paid any active attention to the Bible readings.

To make Scripture reading of practical importance, the passage should be interpreted. But interpretation bears the bias of the interpreter as molded by some ecclesiastical viewpoint. Hence it verges on doctrine which is disputed territory.

If we should take up the case as between Mormons and Christians the possibility of common ground is still more remote. The Book of Mormon contains so much that is at variance with Christian teaching that neither side could tolerate the teaching of the other. And the same is true of Jew and Christian quite largely. Both religious parties might unite on the reading of the Old Testament but not on the New. Neither could they agree on the interpretation of many passages of the Old Testament.

Among denominations of Protestant Christians the greater unity and convergence would be found. Probably all could consent to Scripture readings. Perhaps the majority might stand for interpretation of the majority of passages which are only of ethical import. And, no doubt, after a further sifting of religious sentiments, this will be found to be the largest possible basis of religion in the schools, with reference to Protestant Christians.

Religion a private matter. — The nature of positive religion makes it a private affair. Christianity in its nature is a positive religion, because its fundamental conception and doctrines are gained from historic documents. These documents, like all other records, have to be tested as to

their authenticity or otherwise by literary and historical criticism. The evidence is such that, while many accept it as sufficient, either after consideration or on faith, others do not find it convincing.

The positive character of Christianity may be seen by two considerations. First, in being based on a miraculous intervention on the part of God; second, in being mediated through an authoritative church, the latter position being maintained in addition to the other by the Catholic wing of Christianity. The great majority of Protestants hold to the former. The believers who make religion a natural evolution, and who view Christianity as the upper stage of a natural, rational unfolding, are very few and are considered heterodox by the great mass of believers.

The following definitions of religion, by representative theologians, will indicate how Christians identify it with or hold it as dependent on revelation. "Religion, in its most general sense, is the sum of the relations which man sustains to God, and comprises the truths, the experiences, actions and institutions which correspond to or grow out of those relations. The Christian religion is that body of truths, experiences, actions, and institutions which are determined by the revelation supernaturally presented in the Christian Scriptures." (A. A. Hodge, *Outlines of Theology*, p. 15.)

"Christianity is the revelation of God through Jesus Christ whereby reconciliation and a new spiritual life in fellowship with himself are brought to mankind. The religion of Christ is inseparable from the life and character of its Founder and from his personal relations to the race and to the community of his followers." (George P. Fisher, *History of Christian Doctrine*, p. 1.)

“Religion is the union of man with God, of the finite with the infinite, expressed in conscious love and reverence.” The Christian religion is “that which rests in the consciousness of the redemption of the world, through Christ as our personal Saviour.” (H. B. Smith, *Introduction to Christian Theology*, pp. 52-53.)

“Religion and Revelation are correlative terms; that is, the relation in which man places himself to God in religion presupposes the relation in which God has placed himself to man in revelation; without revelation there can be no religion.” (Article, Religion, by Koestlin in the Schaff-Herzog *Encyclopedia of Religious Knowledge*.)

Since the very center of Christian doctrine is individual salvation through an act or life of faith in the historic person Christ, it becomes at once apparent that the acceptance or rejection of this doctrine must rest on voluntary grounds. Any agency is perverted which seeks to employ force upon individual or individuals to make it accepted. Teaching of the doctrine must be heard optionally. To say that the state or government in the person of its schools shall make compulsory the maintenance of and attendance upon exercises and instruction, embodying the above or other like documentally evidenced doctrine, is to propose a contradiction. Much better is it to leave the whole function of religious teaching and exercise to that social organization, which is not only highly specialized and adapted to render that service, but is so situated that it offers its teaching to all who will accept it of their own accord, and compels none.

The injustice of compulsory religious exercises and instruction is further seen when we have regard to the irreligious and non-religious portions of our population.

The day is past, fortunately, when these people may be arrogantly lumped off as pagans and treated as having no rights. For much over one half of the people of this nation are nominally non-religious, that is, they do not have enough interest in religious matters to connect themselves with organizations whose sole purpose or business it is to promote religious matters. To a large part of this non-religious element, some sort of religious exercise would not be objectionable, although it would not command its attention. To another very large element, however, such exercise would prove highly objectionable. It is this element whose rights in the schools must be considered. It is the business of the church, as a purely voluntary organization, to take religion to these people. It is not the business of the political organization, known as the government, to force religion upon them in any form.

III. THE CHURCH RESPONSIBLE FOR RELIGION

Division of labor among institutions. — In considering where religious teaching should be given, several items appear before us. The first is the relation of social institutions to each other and their division of labor. In a previous chapter, the point was made that society has developed institutions which are specialized agencies for the satisfaction of the several fundamental interests. It will be sufficient here to refer briefly to that treatment. (See Chapter IV, second division.) It was shown that because of its specialization, in order to satisfy a given line of interests, a given kind of institutions, such as the religious, can attend to the business better than any other agency. It would be a waste of social energy, uneconomical, to permit another

agency to step in to do the special work. And, if another agency can do the work better than the institutions specialized for that purpose, it is a sign that the institution to which the social work belongs is incapable and needs reorganization. Thus, it is the function of the ecclesiastical organizations to satisfy the religious demands and interests of the individual. It has been growing more and more specialized for this particular kind of service for many centuries. It is irrational to suppose that any other agency can do the work half so well, because other organization groups emphasize other interests and are built specially to meet them and not the religious.

Now, it is a mark of social evolution to have these divisions of labor clearly distinguished. In political matters, the various departments of government have become clearly differentiated within the last few centuries. It is conceded to be an advance over the situations where there was a medley of functions. Trouble ensues whenever any department oversteps its bounds so as to encroach on the others. Likewise, in business management, various departments have grown up within an enterprise, each with its own particular function. Railroad systems, the steel trust, and other enterprises are made up of such distinct departments. There is no mixing of duties. Responsibility must be definitely located.

The church responsible for religious training.— The same must hold, and must more and more hold, true of our social organizations. It is true that at one time the church was the chief instructor. It established and kept schools. Yet in them its chief emphasis was religion. We have evolved beyond that position and are in the presence of

other great evolutions. Other organizations have been founded and specialized for the work of instruction, — the public schools. They emphasize the intellectual and the vocational side of training, and the further they develop the more this is true. They have taken over this intellectual and vocational training function, because they can do it better than the church, because they can emphasize the things society in general needs; while the church is bound to emphasize the things which are for its interests and will preserve its power. It has developed that the interests of society have been broader than those of the church; and hence to leave the work of training individuals for general social interests in the hands of a social organization whose interests are special and partial is felt to be illogical and unsafe.

There are those who are seeking to place religion in the public schools who do not see the diverse nature of the duty and function of church and school. A writer on religious psychology goes so far as to demand that religion shall be put into the schools as a subject to be taught; that teachers shall be examined by school boards on religion; and that no one shall be permitted to teach who cannot stand the rigid test. Were this possible it would take us back toward mediæval conditions more than a hundred years.

Professor Coe also patronizes those who have not evolved beyond what he calls the "pre-biologic" attitude of mind so as to see things as he does. The biologic view sees life as an adjustment to an environment. He holds that the adjustment is to the total environment and that preparation for life consists in getting ready to respond to all that is in the environment. Hence, since religion has always been

in the social environment, and is at the present time (think of the unchurched masses), education can only be complete which trains religiously. (*School Review*, Vol. XIII, p. 581.)

If this position were met in the spirit of the writer just cited, we should have to regard it as the symptom of the "pre-sociologic" attitude of mind. For the sociological conception of adjustment to the environment has supplemented the biologic by indicating that the factor of intelligent selection has become dominant in social adjustments; and that to accept all in a situation, just because it is there and has always been there, is quite irrational. Social adjustment of the higher order is based on selective discrimination.

It is well to note the statement of Dr. Harris, who (although he may have been in the "pre-biologic" stage) finely indicates the fitness of the church as a special institution to carry on religious instruction. "The principle of religious instruction is authority; that of secular instruction is demonstration and verification. It is obvious that these two principles should not be brought into the same school, but separated as widely as possible. Religious truth is revealed in allegoric and symbolic form, and is to be apprehended not merely by the intellect, but by the imagination and the heart. . . . In religious lessons, wherein the divine is taught as revealed to the human race, it is right that the raw, immature intellect of youth shall not be called upon to exercise a critical judgment, for at his best he cannot grasp the rationality of the dogmas which contain the deepest insights of the religious consciousness of the race."

"The church has through long ages learned the proper method of religious instruction. It elevates sense-perception

through solemn music addressed to the ear and works of art which represent to the eye the divine self-sacrifice for the salvation of man. It clothes its doctrine in the language of the Bible, a book sacredly kept apart from other literature, and held in such exceptional reverence that it is taken entirely out of the natural order of experience. The symbolic language of the psalms, the prophets and the gospels has come to possess a maximum power of suggestiveness, powerful to induce what is called the religious frame of mind. The highest wisdom of the race is expounded before the people of the congregation in such language and such significant acts of worship as to touch the hearts of young and old with like effect.

“We must conclude, therefore, that the prerogative of religious instruction is in the church, and that it must remain in the church, and that in the nature of things it cannot be farmed out to the secular school without degenerating into a mere deism without a living Providence, or else changing the school into a parochial school and destroying the efficiency of secular instruction.” (*Proceedings of the N. E. A.* 1903, p. 353.)

IV. HISTORICAL CONFIRMATION OF SEPARATION

Evils of ecclesiastical supremacy. — The baneful effects on progress of an intrenched religion are shown by Botsford, in the case of ancient Egypt. The Egyptians insisted on preserving the customs and the wisdom of the past until they refused to learn anything new. “By the end of the Hyksos period all progress had ceased. The priests had reduced the details of worship to fixed forms, from which no one dared depart. As the books now prescribed what they,

the king, and the high magistrates should do at every hour in the day, the upper class became the slaves of ceremony. In the same way they regulated the arts and sciences, so that the future artists merely imitated existing models, and physicians were strictly held to the written word. Meantime the wealth of the people had gone to the gods, superstition had robbed their sound moral precepts of all meaning, their intellectual life had come to a standstill. . . . Egypt was a mummy." (Botsford, *Ancient History*, p. 14.) Previously the Egyptians had made rapid progress along scientific and industrial lines. We owe to them the beginnings of many arts and sciences. Had their progress not been throttled by priestcraft and ecclesiastical formalism much of modern advancement would doubtless have been made then.

A few sentences from Seeböhm concerning the influence of the church system, when it was supreme in Europe, will bear on this point. "The ecclesiastics held in their hands the keys, as it were, not only of heaven but of earth. They alone baptized; they alone married people (though unmarried themselves); they alone could grant a divorce. They had the charge of men on their death-beds; they alone buried, and could refuse Christian burial in the churchyards. They alone had the disposition of the goods of deceased persons. When a man made a will, it had to be proved in their ecclesiastical courts. If men disputed their claims, doubted their teaching, or rebelled from their doctrines, they virtually condemned them to the stake, by handing them over to the civil power, which acted in submission to their dictates. . . . As Latin was the language of learning, so Rome was the capital of the learned world.

Thus the learned world was closely connected with the ecclesiastical system. Learned people were looked upon as belonging to the clergy; and the Pope had long claimed them as subjects of his ecclesiastical empire. . . . Knowledge was tied down by scholastic rules which had grown up in times when the ecclesiastics were the only educated people. . . . The schoolman . . . looked at everything with ecclesiastical eyes. . . . Matters of science, e.g., whether the earth moved round the sun or the sun around the earth, were settled by texts from the Bible, instead of by examining into the facts. So there was no freedom of inquiry even in scientific matters. . . . Thus the scholastic system necessarily kept both science and religion the property of a clerical class, and out of the hands of the common people, to whom Latin was a dead language; while at the same time it kept the learning even of the learned world shackled by scholastic rules." (Seeböhm, *Era of the Protestant Revolution*, Chap. 2.)

Evils of fusion of church and state. — The evils of mixed relation of church and state, as begun in Nicene and post-Nicene times, are set forth as follows by Schaff: "An inevitable consequence of the union of church and state was restriction of religious freedom in faith and worship, and the civil punishment of departure from the doctrine and discipline of the established church. . . . In the first three centuries, the church, with all her external lowliness and oppression, enjoyed the greater liberty within, in the development of her doctrines and institutions, by reason of her entire separation from the state. After the Nicene age all departures from the reigning state-church faith were not only abhorred and excommunicated as religious errors, but were treated also as crimes against the Christian state, and hence

were punished as civil penalties; at first with deposition, banishment, confiscation, and, after Theodosius, even with death.

“This persecution of heretics was a natural consequence of the union of religious and civil duties and rights, the confusion of the civil and the ecclesiastical, the judicial and the moral, which came to pass since Constantine.” (Schaff, *History of the Christian Church*, Vol. III, section 27.) Although in theory the church in this period adhered to the principle that she should impose only spiritual penalties, excommunication in extreme cases, yet, because of her union with the civil power, she practically confounded the relation of law and gospel, in theory approved civil punishment of heretics, and not seldom urged the state to such measures.

Even Augustine, one of the greatest and sweetest of church fathers, who started with the belief that heretics and schismatics should be approached only by instruction and conviction, later recanted and advocated for them state punishment. This he based on his views on and the actual relation of church and state. If the state may not punish heresy, neither should it be allowed to punish murder or adultery. Soon after him Leo the Great advocated even the penalty of death for heresy. It was this theory and initiative practice that led eventually to spiritual despotism, persecution, and the fearful Court of the Inquisition.

The Reformation proved that Christianity and external organization are not identical, yet a real revolution in thought was not accomplished in regard to religious toleration until the eighteenth century. After the Reformation, many acts of intolerance and bigotry took place, even in

England, the most progressive of European countries, by reason of the fusion of the ecclesiastical and political organizations. Sometimes it was Catholic against Puritan and sometimes it was Puritan against Catholic. In colonial America, wherever there was a state church, intolerance of differing religious and non-religious views was the rule. Suffrage rights were based on ecclesiastical standing and religious belief. Heretics were dealt violently with. Quakers, the best of immigrants, were persecuted in Massachusetts. Dissenting Puritans were expelled, as were Roger Williams and Anne Hutchinson. Intolerance drove Hooker and his flock to the Connecticut valley. In Virginia, the Puritans were ejected, when the royalist and established church adherents of Charles I came over in large numbers.

The American system the remedy. — America has given to the world a great idea in its method of adjusting the church and state to each other. The germs of all our representative political institutions are to be found somewhere in earlier civilized attempts. American colonies found their political rights already stated in various English constitutional documents, from the great Charter down. Particularly, the "Agreement of the People," drawn up in 1648-9, contains the distinctive political germs later developed and realized in America.

But in the Rhode Island agreement entered into between Roger Williams and his associates is contained the first constitutional separation of church and state known to history.

"Williams founded his settlement on the basis of absolute civil equality and of absolute freedom in religious affairs. There was religious freedom in the earlier settlement of Maryland, but it was not the same liberty that prevailed

in Providence. The former was rather in the nature of toleration, the latter was adopted as a principle of government. It is to Roger Williams and to the settlers of Providence that the student must look for the origin of one of the most important principles underlying the American form of government, — the separation of church and state, which necessarily implies absolute religious freedom. For this Williams deserves a place beside the most prominent statesmen of the revolutionary and constitutional periods.” (Channing, *Student's History of the United States*, p. 87.)

At the time of the formation of the Constitution of the United States, this idea was permanently embodied in that document in the following statements: “Congress shall make no law respecting an establishment of religion or prohibiting the free exercise thereof.” “No religious test shall ever be required as a qualification to any office of public trust under the United States.”

The preceding pages have set forth the evils which arise under confounding the two sides. The American system has afforded a large amount of peace and toleration in the United States. James Bryce has called it the “greatest contribution” America has made to the history of the world. The arrangement has proved so successful that other nations are imitating it as far as circumstances will permit. The tendencies in Europe are toward separation. Within the year 1905, France consummated its task of divorcing state and church, and of placing its schools on a non-ecclesiastical basis, and freed from direct religious interference. England’s educational system is about bankrupt, due to state-church control.

The present Liberal Parliament has made various attempts

to remedy the educational legislation which was passed under Premier Balfour. The aristocratic House of Lords, the support of privilege, has thus far successfully mutilated proposed secularizing bills sent up by the Commons. The reformed churches in England are fighting for justice, and many of their members have refused to pay taxes levied under the Balfour law to support the schools. Feeling has been intense. The liberal ministry has threatened to make an end of the House of Lords because of its opposition to educational and other reforms. There has been an equal or greater strain in France over secularizing the schools, for which the papacy at present entertains a decidedly hostile feeling towards that nation.

In Germany there is much secret dissatisfaction with the religious requirements in the schools. There is a strong belief that religious instruction as carried on there does more harm than good. Says Professor Hanus: "After studying it about two years ago, and its effects, as viewed by many of the teachers with whom I talked on the subject, and as revealed in the growing apathy to religion among the people, I strongly feel that it does not serve its purpose, but is subversive of it. I quote a memorandum or two from my notebook. A state inspector of schools said to me, 'The domination of the church is our greatest obstacle in the path of educational progress.' And the principal of a large city high school said, after I had told him we had no instruction in religion in our public schools: 'You are quite right. Never permit it. It is subversive of the very ends for which it is maintained in our schools.' And a 'gymnasium' teacher of prominence summed the whole matter up admirably, to my mind, when he said at the end of an earnest

conversation on the subject: 'In the lower grades it is without effect, and in the upper grades it breeds hypocrisy.'” (*Beginnings in Industrial Education*, p. 150.)

The state certainly has no business teaching religion for the sake of religion. But if it had, there is evidence to show that Christianity has made greater gains in the colleges of America under separation than under ecclesiastical control. Thus under that régime in the last of the 18th century and the first of the 19th, professors of religion in our colleges ranged from 12 to 5 per cent of the attendance. By 1825 it was 25 per cent, by 1858 it was 40, 45 in 1860, and over 50 per cent in 1900. This period of growth is coincident with the secularization of the schools and the rise of the public school system. “Religion, like patriotism, thrives under freedom. The gains to religion sketched above have all taken place, I repeat, under a system of free public elementary schools, free public high schools, and free state universities, all without explicit or formal instruction in religion.” (Hanus, *Beginnings in Industrial Education*, pp. 163-5.)

It is my firm conviction that morality can be taught in the schools without religious teaching. We have never had a finer display of ethical sentiment in the history of our country or of the world than is taking place now. The foundation of that sentiment is in the rational understanding of the problems which confront us, according to the light of the teachings and writings of great social reformers in and outside of universities, on the platform, in the pulpit and in legislatures. The appeal has not been religious but to the social and ethical interests of men. Perceptions of just and fair relations come out of a development of the

intellectual nature of man. In developing his intelligence to understand the system of society in which he is placed the schools have their greatest warrant, along with the development of the sense of responsibility, justice and service through their work and organization.

At least it is amply shown that for purposes of expediency, for reasons of safety to the state and of freedom to the church to carry on its special work for society, it is imperative that the American system of relating church and state be maintained.

PART III

METHODS OF SOCIALIZING EDUCATION

CHAPTER X. CRITERION OF SOCIALIZATION

The problem.—We have reached the point where some attention must be paid the problem of how to bring about the socialization of education. It would be in vain to talk so much about the theoretical and practical grounds and needs for a thoroughgoing readjustment of the schools to meet the modern conditions, if some way could not be laid out, or better some principles laid down, which would lead to the end, or be regulative in reaching it.

As I see the situation confronting educators to-day there are two essential things which must be done. One of these tasks is the development of a regulating principle which shall serve as the criterion in all educational phases and grades for the selection of the content or subject matter of training. By the use of such a test, if one can be found, a teacher having to settle the question of what to admit into the school and what to reject would be placed in a commanding position. Where now are darkness and bewilderment there would be light and direction. One of the most pitiable features of the present situation, and yet one of the most hopeful, is to observe the general groping about

of educators in search of some guide of what is just the most important of all educational content to put into courses of study.

The other essential task, which must be performed before our schools will be completely readjusted, is the application of the principle or criterion to every programme, to every subject, and to every subject in each of its successive stages of development throughout the grades from the lower to the higher. This really will require a double process. By means of the criterion the appropriate subject matter will be located and admitted. Then it becomes the business of the child psychologist to graduate this material, assigning what shall be presented in each of the school grades. The criterion will decide the *what*. Psychologists will decide the when and the how.

It is not the purpose of this book to undertake the work of the psychologist. Rather, the work undertaken is to develop the justification of the criterion which should be used, to show in a general way what kind of matter it would demand in constructing a school programme, — a course of study as a whole; and the effect it would have on some particular subjects which are found in the schools, if applied to them. In other words, I am concerned with principles rather than with the application of principles to all details. With the establishment of principles, educators will quickly work out the application. In fact, forthcoming textbooks indicate that a principle is sighted, and that the details are being worked out in several lines.

Summary of previous conclusions. — Before taking up the work of this part, it may be of use to the reader to summarize the points developed in former parts of this work,

for the purpose of exhibiting our conclusions till now and of concentrating them on the problem now confronting us.

1. The end of education is to secure the power of adjustment to the social environment in order to control it or to make use of it.

2. Since the social environment is specialized into vocations, under pressure of the division of labor, education must be likewise specialized to meet specific situations.

3. Traditional and formal methods of training, which rest on the supposition that there is a general discipline, do not qualify for modern actual diversity. Specialized institutions and occupations demand special disciplines.

4. In order to decide what educational phases should be emphasized, present social demands must be consulted. It is seen that the economic, particularly the commercial and industrial, demands are most pressing. Hence industrial and commercial training must receive a very much larger recognition.

5. In order to meet the world-wide economic demands of organized society, varieties of community interests or communities with different interests have arisen; such as community A, dominant interest agriculture; community B, dominant interest commerce; community C, dominant interest manufacture; community D, dominant interest mining, etc. The demands of democracy, in its all around life, and the necessary tendency of a progressive society to become more differentiated in structure, and, consequently, more integrated and interdependent, insist on education for community interests.

6. Pathological social conditions are related to education. Education of the right sort may not be able to cure all the

ills of society. But it is proved, for instance, that pauperism and crime, to a considerable extent, come out of a lack of vocational training and definite occupation.

Education must, therefore, seek to prevent the production of paupers and criminals, by fitting individuals to do something in particular and thus to be socially valuable. In so far as the race problem is pathological, it too demands vocational training in order to make the negro race economically independent, first of all, as necessary to other lines of development.

7. The demands of sex difference must be met with appropriate training to answer to the division of labor based on sex callings. The domestic sciences must be introduced for women to prepare them adequately for home-making and housekeeping.

8. Ethical training of the individual must be attended to in school life. Direct teaching, but mostly social training in school and class conduct, are to be the means of this.

9. The demands of evolving democracy must be met by seeking to secure in the young coöperative efficiency, the ability to conduct community affairs, and such essentials of culture as insure the safety and perpetuity of social welfare.

10. Negatively, religious training should not be a part of the state school system, because there is a more specialized institution to conduct religious culture, because of interdenominational strife, because positive and documentary religion is a matter of private judgment, and because expediency dictates complete separation of state and church.

Reconstruction the only valid method of socialization.—Various methods of bringing school and society together have been proposed and put into use. There is the attempt

to infuse the ideals of the school into the community. In so far as the schools are really effective and sufficient this is a worthy attempt. In so far, however, as the schools are backward and defective the result is negative.

Another method is that of "exploiting" the community to bring its life and ideals into the school in order to transform the latter. Pupils and students are sent out to study local institutions and other phenomena of society. The observations are worked over in class. The actual world is thus introduced.

This is most valuable for university work to preserve the students from abstractions, and as contributive to information. Even in elementary schools it can be made a valuable part of training. But it can only partly serve to bring the schools into accord with the larger interests of the world without. It is neither radical nor extensive enough for the task before us. The supplementary matter realized by this procedure is short of vocational demands. Further, it only partially serves to eliminate the effete and empty matter now intrinsic to both the curricula and individual subjects of the schools.

The valid method of socialization is revealed in the answers to these three questions: What shall education dominantly accomplish? What programme of studies and training shall be established to accomplish it? How shall we dispose of our present training matter to permit the construction of a programme that will accomplish it? The answers are, vocational training of the individual; reorganization of present programmes so as to vocationalize the individual in terms of the dominant or some one of the dominant interests of his community; elimination of such

subjects and parts of subjects now in our schools as do not lead pretty directly to the desired end.

The need of reconstruction depends on criterion. — Whether or not there is a necessity for transforming the subjects taught in the schools, of course depends on our idea of the criterion to be used in education. If we hold to the culture idea of education, that all knowledge is useful, since all facts are found in the universe and it is the business of the individual to know as much as possible about the cosmology, then perhaps we shall not find much to criticise in what is now taught. Still, even those of this view would discriminate between what is first most accessible and most important and what is more remote and less consequential, and would use this distinction as a criterion of what to put into texts. Only fools would advocate dumping the whole world of knowledge upon a schoolroom of children. Hence some criterion would be in demand.

If we were exponents of the discipline theory of education, that general discipline is the end of training, that some subjects are more qualified to furnish this discipline than others and that the training of the powers of the child is the chief thing to be accomplished, not much fault could be found with what is now taught, save, perhaps, that there is too much that is useful creeping into the schools. Still, this class of people have a criterion of fit subject matter; for, as they first discover certain total subjects which are better than other subjects for disciplining purposes, so when the chosen subjects are taken up, since every subject ramifies almost infinitely into knowledge around, some way must be found to select the essentials. To find the essentials a criterion of value is required.

And the same ultimate requirement faces us, no matter what may be our educational view.

Where these schools of educational theory would differ from the social-adjustment theory is not in affirming that no criterion is needed, as against its rigid insistence on applying the test of values, but in holding that, after making due allowance in choice of matter out of respect to finite limits of human understanding, it is a matter of indifference, within that prescribed field, whether tweedledee or tweedledum be emphasized; it is all good. We then teach knowledge for the sake of knowledge, science for the sake of science, disciplinary matter for the sake of discipline, etc. Then usefulness and social value cannot avail because they are not the end.

On the contrary, in social philosophy as applied to education, the end of life is social competency and the end of education is preparation for that qualification. Since the individual is to depend on society, is to use its machinery and its values, he must be educated in terms of those organizations of the total machine he is most likely to serve in vocationally; and must be given the instinct of their values if possible. Hence for every particular community programme of training, for every particular training subject, there must exist a social criterion of value. Moreover, the criterion must be as rigidly applied as the military authority applies his scissors or pencil in censoring the news in war times.

Location of the criterion. — Hence, in reorganizing the educational programme some criterion must be found which will be a test of the fitness for entrance of elements of training. This takes us into the realm of values. This attempt

is built on the doctrine of social values. It runs somewhat as follows. Educate the individual to be able to adjust himself in the social situation he is most likely to meet as a life situation. In the various ranges of content to which he is to be subject select just that content which will throw most light on, and which leads towards, that particular environment. In so far as a vocational element is introduced choose the line of training which the individual will be most likely to follow. Some of the details of this choice will be developed later.

Here we have to find the clew to what the situation is likely to be in which the individual will dominantly function. This clew is found in the idea of the community and of the community interest or business. First, it is probable that the mass of persons will live in the community in which they will grow up. Second, if they do migrate it is certain that vastly the greater majority will seek and locate in the kind of community they left. Thus working men will migrate to manufacturing, agriculturists to agricultural, commercial people to commercial districts, etc.

In this way the community becomes the key to the vocational element which should be placed in any given school, and to the determination of what informational areas or phases of the various subjects shall be taught.

To demonstrate that this conception of the relation of the individual to the community is not mere assumption the following facts are presented.

First, the population of the United States, as measured by interstate migration, is quite stable. "The total native born population in 1900 was 65,767,451 (including Alaska and Hawaii, but excluding 75,851 native born enumerated

in military and naval stations abroad). Of this number 51,979,651, or 79 per cent, were born in the state or territory in which they were found by the census enumerators. The remaining 13,787,800, constituting 21 per cent of the entire native born element, had migrated from the state or territory in which they were born and were found in the other states and territories. The proportion living in the state or territory of birth was slightly larger in 1900 than it was in 1890." (*U. S. Statistical Atlas*, 1900, p. 43.) We must expect it will be very much larger in future, due to the exhaustion of new land in the West. With reference to the kind of communities the migrants settle in, that is, the 21 per cent, anyone familiar with the history of settling the West and who has lived in various parts of the West knows that easterners move West and that they are mostly from rural regions. That is, farmers take up the new farming lands of the West more largely than any other class. This principle holds for other classes and other sections of the nation as well.

Second, the growth of cities touches the stability of the population relatively lightly and is largely accounted for by immigration. The growth of urban relative to rural population was only about 12 per cent in a generation, or from 20.9 per cent to 33.1 per cent between 1870 and 1900. (Same, p. 40.) The largest increase is in commercial and industrial regions. Massachusetts has increased its urban population from 56 to 76 per cent; Illinois from 32 to 47 per cent; Kansas from 12 to 28 per cent from 1870 to 1900. Southern and newer western states and territories have increased their city inhabitants, relative to rural, little in that time. (Same, plate 20.)

Immigrants from abroad throng the cities and largely make their excess growth. There are living in cities of 25,000 inhabitants and over, about 75 per cent of Russians; 63 per cent each of Poles, Italians, and Irish; nearly 60 per cent each of Bohemians, Austrians, and Hungarians. These, except the Irish, are the foreign races which now most come to America. (Same, plate 73.) A large part of those and other races settle in smaller industrial communities. Germans and Scandinavians mostly congregate in the northwesterly states as agriculturists and will likely remain such. (Same, plates 65 and 69.)

On the basis of these facts it is safe to state that probably somewhere near 80 per cent of our citizens will remain in the original community, and that those who migrate will go to a social group with interests similar to the old. The environment will be essentially unchanged. It would be safe to say that very much *less than five per cent of the population change their callings.*

It is taken as a valid argument in education to-day that, since over 90 per cent of our youth will not remain in school beyond the elementary grades, our education in those grades should be made more vocational in nature. It would seem to be an equally valid argument to hold that, since we can locate the future vocational interest of even a larger portion of the youth, the dominant interests of any community should serve as the guide in the kind of training the children of that community should have. This interest or the interests will determine the vocational element to place in the center of the training programme; the phases of the informational studies which are most needed for illuminants and supports of the vocational; and, in connection with the

ethical demands arising out of every community, will form the cue to the kind of work to be done.

It may be said that this criterion of the community or locality is now becoming accepted and used. We have previously seen an illustration of this principle in the case of England creating new universities to meet regional needs. And the following case may be taken as a frank acceptance of its validity in the public schools of the United States.

“I may probably best indicate by illustration what I deem to be wise operation of the law that the special character of the business life of a city should affect the forms of industrial education in its schools. My own city (Hartford) is known throughout the business world as a banking, insurance, and manufacturing center. We employ thousands of clerks, accountants, copyists, bookkeepers, typists, and stenographers in these offices of our banks, insurance companies, and manufactures. The factories are devoted largely to the production of high-grade metal manufactures. Our guns and automobiles, our tires and bicycles, our typewriters and automatic machinery, go into every quarter of the world where efficiency is prized. In their production we employ thousands of machinists, pattern makers, draftsmen, smiths, and other high-grade mechanics. The ranks of all these must be recruited from the boys trained in our public schools.

“We recognize, accordingly, that penmanship has in our schools a place which it is not generally accorded or entitled to in many other cities. We deliberately teach it as an important manual art all through the nine grades of the grammar schools, and in the high school as well. Similarly, work in wood and iron is begun as low as the fifth grade of

the grammar schools and carried through the high school. Drawing and design begin in the kindergarten, and are available through every year to the end of the high school course. Typewriting, stenography, and bookkeeping are taught in our high school. Our work in pattern making, mechanical drawing, and machine-shop practice is more extended than might be justified in a city of different commercial life. Our evening high school has not hesitated to undertake the training in its shops and drafting rooms of ambitious young men from the factories. Without conscious formulation of the doctrine that the schools of the community should teach whatever the business of the community demands in a large way, we have accepted it in practice." (Supt. C. H. Keyes, *N. E. A. Rept.*, 1906, pp. 204-5.)

CHAPTER XI. SOCIALIZATION OF THE PROGRAMME OF STUDIES

Problem and aim of treatment. — In considering the methods of socialization it is not easy to see just where to begin. If the various subjects now taught are to be overhauled, they may become larger or smaller, according as contraction by eliminating material or expansion by incorporating new matter exceeds. As to their extent after reconstruction has taken place we are in the dark. Looking at the matter in this way it would seem that the various subjects demand attention first. But since no one man is likely to be intimately enough acquainted in a teaching way with all the various fields of work, the results of changing the subjects cannot be definitely known for a long time. Many collaborators will be required to complete the task. Thus a complete programme of school work must await the accomplishment of this task.

Looking at the problem in another way it appears that the curriculum should be worked over first. How can we determine the form of any part until the whole structure is known? Perhaps the very part will be eliminated entirely or else given a quite subordinate place, as compared with that it previously occupied. It would be of no use, for instance, to work over formal grammar if that subject, as such, is to be dispensed with; or if it is to be reduced in prominence, this should be known by those who undertake to recast it.

The whole task of socialization really promises to be, as it now is, a matter of cut and fit, of experimenting and of selecting the fruitful results. However, something may be gained by attacking the task in a preliminary way, thus offering the suggestions to be improved on. For the reason above given the programme will receive consideration first.

The aim, then, of this chapter is to consider the curriculum, as a whole, for the sake of discovering of what it should consist. As the criticism of each subject and line of work decides what teaching matter they shall contain, so, the criticism of a total programme determines what lines of training shall confront the pupils.

Subordinate ends of education and training groups. — While there is no general course of training possible, there are general principles, or minor ends of education, which should govern the training of every individual. Thus we may demand that the individual shall have command of the devices of communication and computation; and, as we saw in Part II, that he shall be fitted to carry a good degree of intelligence into his particular niche in life; that he shall be habituated to fulfill his social duties; that he shall be a useful, productive citizen; and, we may add, that he shall have developed a taste for some of the finer goods of life.

If we were to think of the process the individual goes through in securing the last four qualities or acquisitions, we might term the process in each successive case information, moralization, utilization, and appreciation.

I. THE TOOLS OF LEARNING

Their importance. — The first group of elements the school must contain is made up of the so-called “tools of learning.” In a measure the phrase, “tools of learning,” is good. It covers a part of the work of these lines of study as they relate to mere school routine. It expresses the truth that without reading, writing, and numbers advance in school knowledge would be severely crippled. And without the acquisition of these technical means, outside knowledge and continued culture, as it is to be obtained in printed matter, would be impossible.

There are three social services the possession of reading, writing, and mathematics performs for the individual. First, they make it possible for him to come into larger and larger fields of information. As has been said, this service is performed in the school. The texts and the library are opened to the child by ability to read. Beyond the school, with the possession of ambition and leisure, all the mines of the world's experience may be explored.

Second, they facilitate and enlarge the power of communication. Since life is so largely a matter of social dependence and intercourse, communication is of primary importance. It is desirable that a person should be able to give and take ideas with ease and pleasure. Reading will render conversation easier in giving ideas and language power. Writing enlarges the area of communication for purposes of friendship and business. Not to be able to write would reduce the individual to a position of dependence on others for the performance of these functions.

Third, arithmetic, or numbers, bestows the power of computation. Civilization moves on the wings of numbers

more than we are apt to think. The average person reckons many times daily. The man of business is absolutely dependent on the business of counting. Even the society butterfly must figure up the prices of dainty fabrics, beautiful floral purchases, cab-fares, etc., and measure them in terms of her purse. The one who could not reckon would be at the mercy of dishonest people and would have to depend on honest and dishonest fellow men alike to do his counting for him. Of course, life and all vocations involving business considerations would be closed to him.

We must therefore conclude that the agents of information, communication, and computation are essentials of individual equipment to-day and must be included in the school schedule.

Method of teaching the three R's. — A further consideration, hardly legitimate in this work, would relate to the method to be used in teaching them. It has long been the custom to consider the three R's as the chief things to be given in the lower reaches of education. It is common to see the training process start with them. We even find a very large part of the first six or seven grades taken up with the acquisition of reading, writing, arithmetic, and grammar. Apparently this is wrong and no doubt the order will be reversed in a measure in the future.

The fundamental task and viewpoint of the school is to give familiarity and skill in their use in the briefest time, and to teach them as means to greater ends rather than as ends in themselves. Moreover, while they are being gained by the pupils so as to be in some degree usable, other lines of training should proceed. These agents will be more quickly obtained by relating them to useful school duties

and to life activities. When the children perceive that numbers are the measure of real things, that reading is the way to get information about products or instruments or customs of the people the teacher is making them acquainted with in social studies, and that writing will carry their ideas to parents and friends, the concrete and lively relation will bring added interest and secure speedier apprehension. Here is an example of the advantage of this method.

In a report on the University Elementary School the *University Record* (January, 1898) says: "Statistics show that, in our existing school system, from 60 to 80 per cent of the time of the first two or three years of school life is spent upon mastery of the technical forms of knowledge, learning to make and recognize written and printed forms and manipulate number symbols." In that school they are taught as above indicated. The report continues, "So far as experience goes, it demonstrates that the relative loss in the amount gone over in the first two or three years is much more than made up for in ability to use intelligently what is got, to say nothing of the inestimable advantage of substitution of intrinsically valuable facts and ideas for the trivialities of ordinary reading and writing lessons, etc."

II. INFORMATION

Importance of the knowledge groups. — The second group of elements indicated is included in that line of school activities which has for its distinct and conscious purpose the acquisition of information. Evolution means a growth in organic complexity. Advance in civilization means social evolution. The civilized child is born into the midst of an intricate, complex system of physical and social

environments. It would not be safe to affirm that the man who knows most is the one who best succeeds in life, because he might be totally ignorant of the principles and means of social control and social realization. To do is equally important with to know. But it is certainly true that the average man must know a great many things so that he may be able to do and to perform. In the rational realm accurate knowledge goes before fruitful action and is its sure base.

We have previously seen that there are two ranges of knowledge which open up to every individual as being of great consequence to him. We shall add a third to the two given in Part II and briefly summarize the reasons for their selection. These three directions of thought are the individual himself as individual, the social environment as it concerns him, and the physical environment as it is related to him. We have to pronounce these ranges of knowledge fundamentally necessary, because without considerable information of each success would be crippled. We are to look for those elements in each range on which individual and social welfare most vitally rest. This will be a means of determining value of facts for purposes of selection and of steering us clear of attempting to exhaust the full scientific and philosophical reaches in setting up studies.

Relative worth of the knowledge areas. — It would be a fit field for discussion as to which of these fields should bear the greater emphasis. We have already considered the relative importance of physical and social conditions for individuals in civilized society. (Chap. V, pp. 83–88.) We saw that the average man is immediately dependent on the social organization and mediately upon physical nature

to supply his wants. As the sociologists would put it, the physical conditions the social; in a measure determines the direction and height of its attainment. We draw on the ultimate supplies of material things deposited in nature and obtain them through social channels in order that our individual wants may be satisfied. We are affected by climate, altitude, and other physical conditions, and temper the direct blasts of nature's forces by inventions which are the product of social experience.

So each term is seen to be important and necessary. First, there is the individual with his wants to be satisfied. These wants are social products. They have their birth in human associations which become possessed of the utilities which any given grade of society bears. The wants of the individual, in range and number, are expressed by the standard of living of his society. The savage has few, the barbarian more, and the civilized many, as many as his standard of living implies.

Second, these wants are supplied by a society organized into structures, or organizations, to provide things and services. To cut the average individual off from connection with these agencies would be to starve him, so few there are who produce their own supplies directly from nature.

Third, only the raw material for the satisfaction of all wants, save those supplied by services, is found in physical nature. Only a few people, relatively, wrest these crass things from her bosom. We have said that to-day three scientific farmers could raise food sufficient to feed one thousand people. There are only about a half million miners and quarrymen in this country who mine for this nation and a large part of the world besides. Most of the

workers, outside of agriculture, are engaged in working up raw material into various consumptive forms, in transporting it to and fro, in clerical and professional work, or in personal service.

From this brief survey of the field we might conclude as follows. First, none of these ranges of information can be left out or neglected. For purposes of society all are mutually involved. Second, since each person directly depends on social organizations and agencies to get his wants supplied, social studies should find a larger place in the curriculum than they now have, and deserve to have a place along with the nature studies. Third, since each field is so vast in its details, careful attention should be given to selecting the most pertinent so that time shall not be wasted on the relatively useless.

Criterion for selection of information matter. — Because each area is so complex, information relative to the individual as such, for instance, breaking up into numerous lines or sciences, a correct standard of value must be commanded by which to test matter for admission to school. In Part II some discussion was given of the relative value of knowledge areas and the decision obtained that our public schools, at least, which are to serve the majority, should offer the training which seeks to fit the young to meet particular social situations. Articulation in society is the demand. Knowledge or training which most directly leads to that is the best. Therefore out of the abundance of information in existence, in each of the three information areas, only just that should be chosen which looks to social adaptations.

Knowledge of self. — The knowledge of the self should be a practical knowledge of the physical self, in order to

know how to use and care for the body which is the agent of realization. This has been so repeatedly set forth in educational treatises that little remains to be added in the way of information. Health, strength, and self-control are the indispensable conditions of happiness, attainment, and serviceability. If a knowledge and control of the machine he uses in his work are necessary to the artisan in order to make him efficient and his employment permanent, how much more imperative is it that every one should understand the nature, the strength, and the laws of the physical mechanism whose defect or failure means suffering, inefficiency, dependence, or death.

If we were to approach the task of selecting the information about self from the side of teaching, we could say that good teaching would consist in presenting just the knowledge needed in the most direct way. The knowledge to be given in each case would be selected in view of the social needs of the individual. Thus to teach how to care for the body is most important, because a healthy condition is the prime necessity for work in the world. Intricacies of physiology and memorizing the names of hundreds of bones, muscles, and nerves should be subordinated to explaining the dependence of health on ventilation, sanitation, bathing, food, etc. Rules and maxims of health might well be taught first, to be followed by scientific explanations only so far as will serve to give rational comprehension. (See pp. 286-288.)

Knowledge of nature. — The knowledge of the physical conditions of life should be that which the individual is most apt to need rather than incidental facts of science. Whether nature study relates to physical facts or to biological forms, the phenomena should be selected with reference

to the thought of service to man. Man's use and needs of the object studied will determine what facts and points should receive attention.

Thus in studying animals it is not the aim to make technical scientists of children. The purpose should be to teach them the place and use of the animal in question; something of its nature and traits, so as to know how it is to be trained and cared for, or if it is to be exterminated. If the cat were the object, it would be a perversion to dissect the cat, or to study its structure relative to other forms of life, in the main. Those methods might be employed and the facts they bring be needed in higher scientific reaches; but what the average person needs to know is the use the cat serves, how it is to be reared and trained so as to make it best fill its place; its food and care in order to make it the best possible cat for its purpose. And so on for the whole range of animals, birds, insects, and plants studied. But the useful before all else. If the pupils stay in school long enough they can get the scientific frills, if there are any.

Naturally, the community interests and pursuits will dominate the selection of the objects and conditions to be studied. In the rural regions, the agricultural uses of the physical conditions, plants, and animals will point out which of their phases shall receive consideration; and show the point of connection in the social situation. A study of the soil of the region in its bearing on crop culture would be more important than a study of the reasons for the change of seasons. An understanding of animal culture should have precedence over casual information about animals of the jungle.

For those who are to go into industrial life, a line of study

involving the physical or the chemical qualities of matter should be given. Laws of matter and of chemical elements, in general, are not thought of because too much that is irrelevant and remotely valuable would creep in. The point of the matter is to select just those realms which will be most used and depended on in their future vocation. The skilled teacher would be the one to make the adjustment of the subject on the basis of the criterion of future usefulness, and so would pick out the most useful parts for grade work. As the grade of work progressed, the area of material to be chosen would naturally expand until it would attain to the rank of physics and chemistry in secondary work, should the individual stay in school so long.

Knowledge of society. — Since the individual, as we have seen, must get his standing and success in society by making use of the agencies and institutions which social evolution has ordained, and without the use of which no one can live the civilized life, it would seem quite as essential that he should understand the social machine he works with as that he should understand the framework and laws of nature. But as the average individual, leaving school as early as he does, cannot master anything like a full science of physical nature, but must be brought to understand the objects he is most likely to meet in the light of their human use, so the science of society is too large and complex to be undertaken in its fullness, and only those concrete portions can be appropriated which lie nearest the life of the average man.

Certainly the local social institutions and organizations, studied in the light of their use and purpose, would be the place to begin. In the case of every one studied, it should be made clear that men use them and how men use them to

get work done or useful service performed. If this point is always directly attacked details and mazes of mere facts will not overwhelm. It is no more necessary to study all the facts and institutions of society, in order to understand social interdependence of individuals through institutions and organizations, than it is to know all the facts and laws of nature in order to perceive the reign of law in the universe. As understanding one human being takes us a long way towards the comprehension of all men, so, to see the use and bearing of a few local agencies of society will go far towards establishing an intelligent apprehension of other and larger structures. Or, as Dr. Charles McMurry would have it done, the local community can be made the type of such communities the world over, and so the pupil will come to an understanding of the world in that aspect.*

The social group information should be connected with the thought of vocation. Those lines of facts which bear on and involve the dominant interests of the community or the class of interests represented by the special school should be mastered. One set of facts deals with the economic content and relations of the vocation to be followed. If one is to go into business for himself, he wants to know the economic forces and laws which pertain particularly to his field. If one is to be a mechanic, the economic significance of his work and products should be the central theme. Only the facts which have the largest bearing on his chosen life work would be given.

* For a valuable treatment of a social science outlined for Elementary Schools, see article by J. S. Welch, *Elementary School Teacher*, May, 1906, p. 441; also same for December, 1906. Also Gillette's "Outline of Social Studies," *Report of the Committee of Seven*, N. Dakota Educational Association, 1909.

With the higher reaches of education, the lines of social study begun below would be further developed and such other lines added as the case would warrant. Here, as before, the proper facts would be those which most closely bear on the context of the individual's future; but, as would be expected, would expand and differentiate in content appropriately with the increased intellectual powers of the pupils.

III. MORALIZATION

In considering the demands which the thought of democracy makes on education, attention was given to the subject of moralizing the pupils in the schools. Both the nature and the necessity of moralization were there set forth. We have here to treat the methods which should be used in the work of rendering the young ethical. We will proceed to the consideration of the two most important methods, didactic and practical moralization.

Didactic moralization. — This is the teaching effort which concerns itself with a more or less direct attempt to build ethical persons. One phase of this is to impress ethical qualities by precept. This will likely be most resorted to with the younger pupils, in the way of impressing the benefits or evils which come to individual actors as a consequence of their conduct.

With pupils old enough to have developed the power of taking in the relation of individuals to larger situations, a less direct method is available and probably advisable. As has been said, democracy in all ranges of social activity, that is, equality of rights and opportunity among all men, is the great end towards which social evolution moves. The greatest dramas of history, many of the masterpieces of

literature, and the mighty movements of the present reflect the tendency to realize the larger rights of men.

Such being the ethical goal of social evolution, and such being the nature of much of the subject matter which is available for teaching purposes, it would follow logically that, first, it is the duty of the teacher to inspire the pupil with a love for human rights in every valid way, and, second, that at least a part of the information material should be selected and presented with this end specifically in view. From my own experience as a student and as a teacher, I am persuaded that moral enthusiasm and love of humanity can better be secured by presenting informational matter in the proper way than by formal ethical teaching; and that an individual in whom the love for humanity has once been established in this way will be most sensitive to social welfare. Its superiority comes in that it develops ethical attitudes in relation to situations. It makes citizens who are ethical dynamically. It breeds a moral enthusiasm of an independent rational order, creates persons who are able to take reasoned attitudes with reference to new conditions. This kind of citizen is necessary to secure social progress. Character which merely conserves does not guarantee a changing order.

Practical moralization. — But beyond the formally didactic and the sermonic element in training, perhaps the most forceful means for moralization will be found in the actual social organization of the pupils in school; directed toward arousing a spirit of "fair play," a hearty appreciation of the value of their fellows for coöperative purposes, and some practical skill in forming and using group action.

Particularly in the earlier years of school life, the possibili-

ties in these lines are exceedingly great and only the more advanced teachers and schools are adequately testing them. Life then is most plastic and formative, and hence the work is more effective and basic. Again, children are more susceptible to control and suggestion. Later, if not previously moralized, the wayward and refractory might require force. Further, there is a time advantage, in that elements of control laid early will have all the longer term in school for further strengthening.

If enlightened self-government is the ideal and end of a democracy, certainly it is preposterous and contradictory for the fundamental agencies in the direct preparation for citizenship to withhold from the individuals in tutelage all instruction, training, and participation in the processes of organizing themselves, and of feeling the responsibility for the functions of citizenship.

To make the pupils conscious of group life, to be loyal to and considerate of the collectivity, to see and appreciate the dependence on and coöperative helpfulness of social fellows, to grasp the value and sanctity of personality and of its rights in its social settings, to give self-control under authority and self-restraint and devotion under responsibility, is to moralize the individual. And of course the full agencies of group life in school, the school as a group, the class as a group, are to be used as concrete and immediate instruments of social disciplining.

The very best way to prepare children to become morally responsible is to create the machinery in, or in connection with school, which will cultivate moral attitudes and judgment ideals. The agencies which will secure "emotional attitudes," as Professor Bagley suggests, are the

most useful and effective. Such an adjunct as the school garden, which gives each pupil the sense of property right and property relations to others, is an admirable means of securing this, as Baldwin at Hyannis has demonstrated. By means of the garden plots, care of tools, etc., he was enabled to develop an alert and working sense of community responsibility which oceans of talk could not have done. Actual life situations were obtained which called out life attitudes of adjustment. The interest in the situation was real. Efforts to correct abuses of privileges were genuine, and organic, therefore, because the situations were real ones, and the interests were natural and not assumed under external pressure of authority. Precisely the sense and kind of ethical judgment were provoked which are needed on the part of grown people in society. The advantage was in favor of the children because they had the leadership of a wise instructor who could help them to come to just and fair decisions.

Another means of securing actual moral training is to be found in self-government undertakings in the school. Recognition is obtaining, that it is desirable to have students participate in the conduct of the school, in so far as student control goes. In an introductory note to "Student Participation in School Government" (issued by W. R. Ward at New Palz, N. Y.), President Charles W. Eliot, of Harvard, mentions three fundamental objects of education. First, as to development of character, "to cultivate in the child a capacity for self-government, not a habit of submission to an overwhelming, arbitrary, external power, but a habit of obeying dictates of honor and duty as enforced by active will-power within the child." "The second is that in child-

hood and youth it is of the utmost importance to appeal steadily, and almost exclusively, to motives which will be operative in after life." The third "is Froebel's doctrine that children are best developed through productive activities, that is, through positive, visible achievement in doing, making or producing something."

The first and second objects are admirably secured by the School City and other self-government devices.

If actual self-government interests and motives can be called out and trained, when the student gets out of school he is experienced for actual and practical civic matters. He has the practical experience, the habitual emotional attitude so necessary to character, as well as the ideals of what is just and right in government.

(See Bagley's article, "The School's Responsibility for Developing the Controls of Conduct," *Elementary School Teacher*, March, 1908; Ray's *Democratic Government of Schools*; Ward's *Student Participation in School Government*; articles on Vacation Schools, etc.)

IV. UTILIZATION

Need of utilization. — This term covers the educative processes which have as their specific aim the enabling of the individual to make use of his knowledge, skill, and powers, so as to bring them to bear on actual situations of life in the most immediate and effective way. The motive of the public school system should be so to train the individual that all elements held within the personality shall be organized and coöperative, that in the time and place of action all the powers shall spring to work at once to accomplish the given undertaking.

More specifically, utilization enables the person to become productive. Whatever else education should accomplish, it should not leave unaccomplished the training of the coming citizens for complete self-support. Outside of poor distribution of population and industrial crises, as causes of poverty and criminality, lack of technical training, of skill in vocation, is by far the largest contributing cause.

As a causal agency this lack of vocational training works in two ways. First, under work conditions the individual cannot keep employment for long, and may not secure it even, because of lack of special skill; and in times of emergency he is the first to go and the last to find a place again. Second, the growth of the child, under conditions which do not furnish vocational training, has a negative influence on the development in other lines. That is, action is inherent to childhood. Work is more natural than its omission. Play is a device, in part, to take its place. The happiest and the best developed child is the one given a due portion of tasks in early life to work out. Particularly in urban communities this element is lacking. Mere manual training would be justified, as an educational device, to give the child control of himself in mind and will through body discipline. This could well be made a factor of moralization.

Some of the important elements in this process of utilization are organizing principles, vocational technique, and initiative.

Vocational technique. — The technique is the vertebral column of the vocation. It is possible to have a great deal of knowledge about a vocation without being able to command the vocation. One may know how a blacksmith shoes a horse, welds two pieces of iron or sets a tire, so well,

indeed, that he could make the processes quite intelligible to another in an explanatory way and yet be unable to do any of these things. The skill, the exact ways of doing things, or of carrying on a series of processes, the methods of procedure as distinguishing peculiarities of lines of work constitute the technique. It is inconceivable that anyone should make a success of his chosen pursuit without mastering these detailed methods of procedure. The greater the mastery, the informational factor being granted, the greater the success.

The regulative ideal as to what should be introduced in any given place may be represented in the thought of local autonomy, that the economic interests of a locality or group shall decide what phase or phases of training for vocation shall be emphasized in the school. Agricultural regions would logically emphasize agriculture, with attention to elementary and practical mechanics, and to domestic science, to fit for farm life. The consolidated schools are the only schools in rural regions which could properly develop this ideal.

Communities which maintain schools, with possibilities of differentiation in education, could carry or emphasize the lines of technique leading into various industrial interests, and in the academic work group the subjects so as to concentrate toward commercial or professional interests. Thus, those who expect to pursue industrial life will lay stress on industrial training in their given line; and will take such academic studies as throw most light on and support the industrial matters. Those who have commercial or professional aims will choose their group of academic studies leading in the chosen direction, and lay stress on those

educative lines. Such persons would probably take some industrial work for physical health and motor control.

Organizing principles. — In whatever line an individual trains himself there should be given, to lie behind the mere technical details, as large a fund of guiding principles pertaining to the trade, the vocation, or profession, as the stage of mental development will entertain. In other words, the rationale of the line of achievement to be prepared for should be given.

In the higher commercial courses of universities the programme of studies is so arranged that along with those subjects which give the detailed and technical training goes a group of more general sociological subjects, let us say, which afford the more general principles and guiding lines for managerial direction and responsibility. Something of this same arrangement needs to be extended downward. The one looking to a commercial career needs more than the so-called business training. A good knowledge of economics, government, industrial history, and other cognate subjects will give a social perspective and grasp of principles of collective life which are necessary to give outlook and save from mere clerical narrowness.

The same attempt should be made with reference to the industrial training. A disadvantage of making every one a skilled artisan, merely, perhaps would be the narrowing results, that is, lack of ability to adjust to changed industrial conditions, such as are brought in by the introduction of new machinery which might eliminate the old line of work. Such a narrow training would be better than none at all, as is now true in most cases of training in public schools. But it is more important, where possible, to develop the

reasonable groundwork of the trade or technological line with less of the mere skill in one line, than the reverse.

This point is disputed. President M. P. Higgins of the Norton Emery Wheel Company, Worcester, Massachusetts, criticises all lines of trade and technical schools, from lowest to highest, because they have failed to produce really skilled workmen. "Any education for the trades, in order to meet the reasonable needs and demands of the manufacturer (*Proceedings of the N. E. A.*, 1903, p. 597 *et seq.*), must make *skill* the central part of the enterprise. The educational system must start from the shop, and all other elements of the school must radiate from the shop, because the power and success of the pupil's life are to depend upon his shop knowledge and dexterity." He says, however, that manufacturers have come to understand "that we cannot have the skill of the order and grade we demand unless science and general discipline are the basis of the skill and the accompaniment of the skill," p. 603. Principal A. H. Chamberlain of the Throop Polytechnic Institute of Pasadena, California, holds that what we need to do is to *educationalize* the trade school by "injecting into it the thought element to a greater extent." Qualities of initiative, guidance, and leadership are demanded of trade school graduates.

Some such thought as this is embodied in the work of such institutions as Clemson College, South Carolina, an industrial school, North Carolina College of Agriculture, and others. The president of the Board of Trustees of the former, in an address, said that it had for its object to "educate their minds, broaden their intellects and teach them all the fundamental principles together with the practice in all the

different departments of work. When they get through they have such an experience and knowledge of these matters that any man with the knowledge that we furnish him can make a man of himself in any department of life." Mr. Beaty, director of the textile department, states that the main purpose of their combination of academic and industrial training is to make the student able to reason for himself, to make it possible for him to "do his own reasoning and thinking as well as to handle tools and instruments if necessary." (*Amer. Jour. Sociology*, Vol. 10, pp. 396-7.)

Wherever time limit prevents the higher educational development necessary for the acquisition of these principles, as the short period of schooling now unfortunately imposes, the trade, vocational, and mechanical side is the one which should be emphasized, so as to make sure of a basis of self-support. Thus Prof. Thomas Balliet advocates forming trade schools for boys of fourteen years of age and over who cannot go to High School.

This training should begin at the end of the sixth or seventh year and continue for some four years with academic work, so Dr. Balliet advocates. "Statistics show that a large majority of men engaged in the wood-working and iron-working trades have never attended high school. Quite a fair percentage of them have never completed a grammar school course." (*Proceedings N. E. A.*, 1903, p. 598.)

Initiative. — Much that has been said under the last point is also necessary in training to give the power of initiative and execution. It would be gratuitous to enlarge on the need of training to secure this, or at least of so educating as not to stifle that degree of initiative with which the individual is born. Two things are certainly necessary to arouse

and encourage initiative. One is giving the individual some glimpse of the variety of vocations existing in the world to-day, emphasizing the possibility and desirability of attainment. The other is developing the motor side of getting knowledge in the getting. The first seeks to make the world of possibilities alluring to the youth; the second, so to give elements of knowledge that they are deposited in the individual as dynamic. The second is quite as important as the first, probably more important, for knowledge through experience is most apt to be a working force.

We need to say, here, that not every one can be expected to gain great initiative in forming and executing large plans. Yet the concrete touch with definite special tasks will enable those of low mental grade to prosecute the mechanical tasks and vocations with fair competency and will afford those of higher endowments opportunity and practice in building up the original impulses into self-directing and effective realizing agencies.

Education as expression.—Looked at in the light of expression, education may as legitimately be directed towards motor ends as towards sensory. The common opinion views only mind effort as truly educational. If education is expression, then training the individual to express himself along any line or in any valid form of activity, is truly educational. Probably the average individual is better for both sensory and motor training, as well as capable of it. There are certain individuals who are capable of taking very little mental training, and work at great disadvantage under what they do take. In some line of motor expression they are found to be very capable. If we maintained the right viewpoint, we should place them where

they belong, and give them that form of education to which they are adapted. A painting, a statue, a monument, a building, a machine, a piece of furniture is a product of motor expression, and it took true training in the case of each to produce it. The world needs such educated agents quite as much as the majority of individuals need such education.

V. APPRECIATION

Appreciation. — This element in education might be characterized as the taste and ability to recognize and select those features in nature, knowledge, and art which lend to the charm and contentment of life. In taking these up, as cultural lines, the beauties of nature and the training to enjoy them should evidently stand first, because the book of nature is open to every one. The need is that, having eyes to see, all may be enabled to see with them the glory and ideals of nature. Description of scenic phenomena, books of travel, and nature study are valuable adjuncts to immediate contact with nature itself.

Perhaps the next most accessible element after nature culture is that of reading. The taste for the beautiful in literature and the habit of reading for pleasure, as well as for profit, are reliable means to give satisfaction in life. They can be developed in connection with all departments of academic work, especially along with English studies. Books to-day are almost as plentiful as beauties of nature. Public libraries have brought them within the reach of all.

Measured in terms of accessibility, or availability, perhaps music would follow on reading. In many cases it

might seem even more available. When possessed as an acquisition it is certainly the source of great satisfaction, and one of the likeliest agencies to provide entertainment, charm and solace. Singing is within the reach of all who have the ear and voice for it, and once developed is completely transportable.

To the average person, painting and sculpture are least possible of attainment, the least accessible, since their passive enjoyment depends so largely on great art collections, and since they are the most remote from the springs of modern life. Save as roads to nature, one could hardly justify the expenditure of much time on them in the average school. A few lessons on how to appreciate whatever there is of beauty in paintings would be of greater value than training to reproduce nature or life.

VI. ARTICULATION OF TRAINING FACTORS

The ideal. — The ideal plan of articulating the several elements which have been treated would be to group and fuse all the various factors about the thought of vocation which would serve as center or core of the school programme. At least a large part of the informational matter could be made to bear on the future calling, and to illuminate it in a cognate and coöperative manner. It is almost impossible to plan for communities in general. Without the actual community before us, it is almost useless to declare just how this or that should relate itself to all the rest. Perhaps a few principles may be stated instead.

1. Of course the locality will determine what or which vocational lines shall be emphasized. This training, whether agricultural, industrial, commercial, or professional,

should hold the center of the course in every case. The time to be spent on it will depend on whether the school programme has been thoroughly socialized, in whole and in subjects, or whether the vocational factor is merely added, *ab extra*. In the latter case, probably one half the time should be given to it after it is introduced.

2. As between the general and special in vocational training it may be said that the lower down in the course of study, the greater the attention which should be given the special; while the higher the stage, the larger the amount of the general or contiguous work which may be introduced; although this probably should not exceed the proportion of one to two relative to the special.

This holds for industrial as well as for other lines of work, and is based on the laws of mental development as well as on the relative importance of the general and special, in view of the possibility of the individual dropping out along the line. That is, low down the general can be little given, while the concrete special is more attainable and more liable to be of use.

3. The groups of information should be begun as early in the course as possible. For instance, the factors of society, of collective life, are as available for teaching purposes in the lower grades of work as are those of the physical environment. As has been said, the latter, in the shape of nature study, now leads up to and is eventually differentiated into the various natural sciences of later grades of work. So, the simple and descriptive facts of human associations and pursuits may be begun early, and be carried on until social study breaks up into various social sciences above. The same may be said of the study of self. The physical and

social lines of information, in a somewhat differentiated form, could be carried on in the eighth or ninth grade. If one is to become a commercial or professional man in life the social studies should receive relatively more and more emphasis; while if he is to follow an industrial calling the natural science studies should receive the stress.

4. Those who will evidently leave school early, say at the end of the eighth grade, and who take industrial training, along with academic work, should give such proportion of time to each that each shall be attained to that reasonable degree the time will permit. As has been stated, about one half the time should be given to the industrial line to secure the skill an apprentice needs to enter upon work. This is the proportion of time given in certain trade schools. Much of the social information may be obtained in direct connection with the vocational work.

5. Recent experiments seem to indicate that the mere instruments of learning and business may be obtained while the information process is going on and in a subordinate relation thereto. That is, they should be obtained in connection with knowledge-getting, and gradually develop out of concrete knowledge situations. As rapidly as they are controlled they should be put to use, and the skill to use them should be further developed by making them agents of acquisition.

6. Since moralization is to take place, not so much by discussion of abstract situations as through group activities, the whole range of school associations should be used to convey high ideals in social relationships, and to secure deeply habitual right social adjustments. Class time is not too precious to consume for this end whenever an appropri-

ate situation arises, and situations should be made. Every class-group, and the school as a total group, should be vested with self-government responsibilities as rapidly as they are able to carry them, be helped to make their rules of collective conduct, in administering them with fairness and dispatch, and in treating offenses justly and firmly. It will thus be seen that no specific time relation can be set for this educative process.

7. Wherever a pupil expects to make a life vocation in any æsthetic line, his time should be allotted thereto as in any other vocational undertaking. For the average pupil in school the time spent in æsthetic work should be a minimum relative to the vocational and other lines of training, since the æsthetic elements lie in the perimeter rather than in the center of the educational circle of work. The fundamental must have allotted space. The trimmings of life must be adjusted to them.

Illustration from technical lines.—A typical way to articulate the technical element with the other training factors may be seen in Ella Flagg Young's development of the relationship in strictly technical education. "At the age of 10 or 11 years, children should begin a substantial line of work in physics. Such work should have as its object the starting of children's activity along the line of scientific inquiry. Instead of being an incidental subject taken up once or twice a week, it should be in the foreground daily. A prominent feature of the work should be experimentation with the lever, the wheel and axle, and the pulley, using simple apparatus constructed by the children; but the experimentation would fail of its possibilities if it did not lead to a discovery of the mechanical advantage involved and to a

recognition of this advantage in machines of all sorts that fall within the observation of the children.

“Another line of work—that leading to technical analysis—should be of a practical nature in connection with foods, plant fibers, and other useful plant products. In the following year this scientific study should be extended to experimental work on the effects of heat and cold on solids, liquids, and gases, and a recognition of the effects in a variety of things; a study of the gases of the atmosphere and of atmospheric pressure, involving hydraulic pressure, with a number of applications; a study of ventilation; practical work on the preservation of foods. In the eighth grade there should be a study of the electric battery, current electricity and its application in simple electric devices; a study of the eye, some work with lenses and the problem of lighting.

“This programme would give boys and girls between the ages of 10 or 11 and 14 or 15 years a good experimental basis in physics, chemistry, and biology, and in the practical or industrial arts. The method of handling would, in large measure, limit the young minds to the mechanical point of view, or stimulate those penetrative and constructive tendencies that underlie one of the richest modes of mental activity—the scientific imagination. If the method be the one commonly followed in the elementary science teaching, that of demonstration by the teacher, the capital that was gained in primary construction or handwork is not invested by children of average mental ability; motor images are not integrated in the experience; that experience is one-sided, sensory only. If the generalizations underlying that recognition of principles which is essential to

scientific thinking are derived in considerable part from the leadings or hints of the demonstrator, there is for the members of the class slight or no deepening of the moments of experience. The impulse to handle, to shift, and to adjust the bar, the rope, or cord; the power to estimate the pressure which the fiber withstands, the amount of heat, the quality of the electric current, and to appraise the value of the experience that comes almost imperceptibly by way of the adjustments of the body — much of this impulse and this power is lost out of the work in science when the teacher adopts the method of demonstration. It may seem that too much time and space are here devoted to the educational phase of elementary science. I think not. If technical training is to be articulated in the elementary-school course, it must be jointed in, not tagged on." (*N. E. A. Rept.*, 1907, pp. 1038-9; see also socialization of the various subjects, especially arithmetic and history.) •

CHAPTER XII. SOCIALIZATION OF SUBJECTS

I. GENERAL CONSIDERATION OF CRITERIA AND METHODS

Meaning of socialization of subjects. — In a previous chapter, the reconstruction of textbook subject-matter was denoted as one of the means or methods of socializing the schools.

By socializing a subject is meant (1) the process of bringing to bear on it some social criterion, some adequate test of value; (2) the elimination of the more useless and irrelevant portions as measured by the criterion; (3) the supplementing of this subject-matter by such useful additions as seem necessary under the test; (4) the reorganization of the material which results into a new body of teaching knowledge.

It will be evident that this undertaking stands in close kinship to the other method of socialization proposed as the accompaniment of this one, namely, the reorganization of the training programme so as more closely to express the present social situation. The relation of the two was discussed in the preceding chapter.

Criteria of various subjects not identical. — It might readily be conceived, without considerable deliberation, that if the criterion, social value, is assigned as the proper one to apply to subjects seeking admission to the school programme, the whole problem is ended, the only thing left to do is to apply the test and admit or reject the subject; likewise with

reference to the content of the various subjects admitted, that the same criterion of value will apply to all subjects alike. The first part of the supposition is correct. The only question about admitting any certain subject to the school is, does it possess greater socializing power than some other? Is it more usable in actual life?

But when we have admitted, let us say, language study, history, arithmetic or number study, nature study, social study, etc., and we have then to decide what and how much of each, we do not have an identical criterion to apply immediately. Each subject has a particular test of its own. Each one has a specific social result to accomplish, which differentiates it from the others in the family of training factors. While all alike look to the general end of preparing for social adjustment, each one has a subordinate end to subserve which is peculiar to itself.

Thus, the subordinate end of American history study is not merely to get acquainted with a developing society, but to get a thorough grounding in those portions of American development which bear on the present with especial emphasis, and also which bear on the vocational situation the pupil is to prepare for. The immediate end of number study is not to become conversant with the manipulation of quantity symbols in all their phases, but it is to control those forms of number computation the particular pupil is most likely to have to use in his business relations. The subordinate end of language study is not to become familiar with all the possible technical grammatical forms, or to become practiced in parsing with mathematical precision and lightning rapidity the most obscure poetical and oratorical passages; it is rather to obtain an accurate and facile use

of English expression, both for oral and for written communication. The social purpose of nature study is likewise special, namely, to obtain a knowledge of those portions of nature lying or likely to be nearest our pathway, with special reference to understanding their control for use. And so on for the other subjects.

No doubt the very best way to convey my meaning about socialization is by way of illustration. In order to emphasize the social point of view, with reference to the various individual lines of study, several subjects will be considered for the purpose of indicating what kind of changes are desirable. A comprehensive treatment cannot be accorded any one subject. To do that would be to write a method of each on the basis of this viewpoint.

In my estimation, the complete reconstruction of school studies must be done by actual teachers of those subjects who have had a thorough grounding in them, and who, in addition, grasp the principles and criterion of the social view of education so fundamentally that they will serve in all parts of their fields to separate the valuable from the worthless. It is the teaching sense, in relation to each of the various subjects, which is needed for the accomplishment of the task and which any one person lacks who seeks to orient the social view for all. Hence there is need of a corps of collaborators.

II. THE SOCIALIZATION OF ARITHMETIC

Elimination made by teachers of mathematics.—In getting arithmetic on the most practical and available basis, there must be kept in mind its social function as in the case of other studies. In a previous place its social service was

indicated. The primary use of numbers is the quantitative measure of property values in buying and selling economic goods. It is to apportion quantities of anything in order to its just distribution relative to individuals.

So far as undifferentiated schools are concerned, those in which the masses are being educated, at present the problem is how little of mathematics may be taught, what is the least possible amount of the same which may be given in school, and yet which will serve the purposes of life adequately.

Professor Burgess Shank holds that disciplinary and cultural aims of mathematics are subordinate and incidental to the utilitarian. "The science of number and art of computation have been and will continue to be studied chiefly and primarily because of their use in the struggle for existence. The above statement applies more fully and powerfully to each succeeding generation than to the past. The more intelligent society becomes, the more complete the social structure, the more specialized the functions of the individual, the greater the need for that precisely quantitative application of scientific knowledge which is the chief social use of mathematics. Therefore, arithmetic and other branches of elementary mathematics will play a continually more important part, and hence require to be better learned and better taught in the twentieth century than ever in the past.

"But it evidently does not follow that arithmetic or elementary mathematics requires a larger part in the school curriculum than heretofore. Recent improvements in teaching in this country have shown that children can be taught many more things and much more of each than was

possible in the poor schools of the past." (*Catalogue of State Normal School, Valley City, N. Dak., 1904-1905, p.15.*)

Prof. D. E. Smith of Teachers College, New York, states that if we place arithmetic on the utility basis, we must conclude that the general impression that a very great amount of time should be spent on it because of its exceeding usefulness, cannot be justified.

"While accuracy and speed in simple fundamental processes have been underestimated, the value of presenting numerous and varied themes in pure arithmetic, and of pressing each to great and difficult lengths, has been seriously overrated. For the ordinary purposes of non-technical daily life we need little of pure arithmetic beyond (1) counting, the knowledge of numbers and their representation to billions (the English thousand millions), (2) addition and multiplication of integers, of decimal fractions, with not more than three decimal places, and of simple common fractions, (3) subtraction of integers and decimal fractions, and (4) a little of division.

"Of applied arithmetic we need to know (1) a few denominate numbers, (2) the simple problems in reduction of such numbers, as from pounds to ounces, (3) a slight amount concerning addition and multiplication of such numbers, (4) some simple numerical geometry, including the mensuration of rectangles and parallelopipeds, and (5) enough of percentage to compute a commercial discount and the simple interest on a note."

The table of troy weight, the tables of apothecaries' measures and equation of payments are needed by but a few in very special lines. Few save engineers and scientists ever need cube and square root and then use tables instead

of rules. Alligation (still taught in Germany), compound interest as taught, "compound (and even simple) proportion, greatest common divisor, complex fractions, and various other chapters likely might be omitted. These subjects, which are the ones which consume most of the time in the arithmetic classes of the grades after the fourth, are so rarely used in business that the ordinary tradesman or professional man almost forgets their meaning within a few months after leaving school." Little is needed of compound numbers, on which a year of time is now spent. The metric system would displace them and save much time.

On the utility basis this author thinks the child should have (1) "a good working knowledge of the fundamental processes" set forth above, (2) "accuracy and reasonable rapidity," and (3) "a knowledge of the ordinary problems of daily life. Were arithmetic taught for the utilities alone, all this could be accomplished in about a third of the time now given to the subject." (*The Teaching of Elementary Mathematics*, pp. 20-23.)

It may be predicted that as time goes on there will be a differentiation of arithmetic to meet the various lines of activity, and that while the theory of numbers will offer a common basis for all, with perhaps a few practical applications for common social purposes, beyond that point the mathematics taught in the schools will pertain to the vocation in which the individual is to work.

This is the tendency and largely the practice in the German continuation schools. For instance, the continuation school for business apprentices given in Chapter XIII takes its arithmetical problems from the actual business in which the pupils of a given group or class are engaged.

Localizing arithmetic. — The following suggestions by Principal G. R. Davies, on arithmetic for North Dakota, indicate how it might be adjusted to an agricultural region. (*The Extension*, Agricultural College, Fargo, N. Dak., December, 1908.)

“The predominant agricultural interests of the community open a wide field for applied arithmetic. The teacher who has some knowledge of scientific agriculture — as every teacher should — will continually take illustrative material from farm surroundings. Appropriate to the autumn season would be problems involving total yield and rate of yield of various crops, cost of threshing, capacity of bins, rate of plowing, cost of labor, etc. In connection with such problems items of knowledge learned in other classes may often be recalled and thus reviewed. Questions involving price give an opportunity to fix the important social law of supply and demand.

“Problems may be invented, or made from data furnished by the children, involving cost of raising stock, profit or loss on the same, live weight and dressed weight of meat, cost of fodder, nutritive ration and balanced ration, percentage of butter fat in milk, and so on indefinitely. It is not expected, of course, that such problems would constitute the whole course of study, but rather that they would be thrown in as mental or written work when occasion offers. A live teacher necessarily uses much material that he must invent to fill some particular need, and there is no reason why such material should not be taken from the farm environment. Several books are published that are helpful in this direction.” Among these may be mentioned Hall's *Practical Arithmetic*, published by American Book Company.

“ Government statistical reports, such as the abstract of the census or the report of the Bureau of Statistics, though they take the pupil more widely afield, afford much useful data for problems. A class in need of practice in computing percentages may well be referred to such sources. The material may be obtained by application to the various departments at Washington, or through one of the congressmen. Some of the subjects that may be taken up are changes in population of county, state, or nation; comparison of cities; crop yields by states; output of industries; savings-bank deposits; rate of railroad accidents; cost of living as compared with former years. In connection with the latter subject, opportunity may well be taken to notice the relation of the rise in price level to wages, salaries, and the earnings of capital. The simple economic laws involved are not beyond the comprehension of a seventh or eighth grade pupil, and will be of assistance in developing an insight into the complexities of modern life.

“ Outdoor measurements may be conducted by an entire class working together under the direction of the teacher, or by smaller groups if the class is large. A fourth or fifth grade will enjoy measuring the school yard and making accurate maps of it. This work will come in connection with the home geography. Later, areas may be measured and computed in acres. A real knowledge of the foot, yard, rod, and acre will thus be developed. In the highest grades some interesting illustrative work may be done with the triangles. By setting stakes to mark the corners of two similar vertical right triangles in such a way that the apex of one triangle is some stone or post on the opposite shore of a pond or stream, it is possible by propor-

tion to compute the distance across the water by measurements taken on the one shore. Last spring I sent the boys of my geometry class to a neighboring stream to measure its width in this way. They were surprised to find that they could complete the measurement entirely from the one bank. The experiment enabled them to comprehend how the surveyor triangles across a valley. By the use of the same principle they computed the height of the flag-pole on the schoolhouse and of a near-by tree.

“Local industries and civil organizations may be drawn on for data. The size of the elevator will furnish a problem in computing capacity. Use may be made of data concerning shipments of wheat, — cost, car capacity, destination, etc. When the class is studying taxes get the township or school clerk to inform you as to the valuation of the township or district; let the class estimate the tax levy, and compute the rate. They may then extend the total tax for various imaginary or real individuals. When my eighth grade was studying the subject last year, I obtained data from the tax receipts of the gentlemen who had property in several localities. The class found and compared the rates.

“Proportion and some other subjects are well illustrated by the physical laws of the pulley, lever, wheel, and inclined plane. The laws of motion and the principles of mechanics are thus introduced. They ought to be taught more than they are in the common school. Just recently I heard a supposedly intelligent person expressing wonder at the strength of a horse because it was moving a house. The block and tackle were overlooked. A person so ignorant of mechanical laws is not in a position to understand this machine age.

"It is essential in illustrating arithmetic that the teacher should be continually on the watch for material. Perhaps a mason will be setting stakes and strings to mark out the position of a foundation. You may see him measure from where two strings cross, eight feet on one string and six feet on the other. He then measures diagonally across to test his right angle. Call the attention of the eighth grade to the measurements — perhaps even have them reproduce them — and you will have thrown considerable light on the rule relating to the square on the hypotenuse. The teacher who is interested in his environment and is alive to the world of industry about him will soon bring arithmetic into touch with real life."

III. THE SOCIALIZATION OF HISTORY *

What history should do for students. — In considering this subject no attempt is made to mark out the work and function of the historian in his original, specializing capacity as historian; but attention is called to some things which the educational situation seems to demand from histories.

The sooner we can banish the polite information idea from our history study, the better off we shall be. We must substitute for it the idea that history gives information that is useful because it helps to throw light on the problems of our times, or is a study of those problems directly. We want men and women who can tell where our chariot of state is going, by knowing the meaning of the tendencies of the times. We want them to know how to vote in a national campaign on the tariff question because they understand

* This treatment of history is the larger part of an article by the author entitled, "Reconstruction of History for Teaching Purposes," which appeared in the *School Review*, October, 1909.

what the relation of the tariff to themselves and the national life is. We want them to understand the political system under which they live, in spirit and machinery, well enough to be able to decide whether their rights among men are being subserved or subverted; and if subverted, to have some notion of remedies. We want them to get larger visions of social equality and social justice, as against industrial exploitation and political deception; to burn with enthusiasm for the rights of man; to have ideals of a better society and faith in social progress. Since history holds such a large place in the schools, it must be held accountable for using this extensive and expensive time in the life of the child to secure directly practical results. It is a case of history or nothing, for history is about the only study now in the schools which extensively occupies this field.

Bad conditions in history work. — Any criticism which might be made of the existing condition in history work of our schools must come from facts. We have results which stare us in the face as to what has not been accomplished in the past. We have an ignorant citizenship, ignorant of the meaning of the issues confronting us now and liable to be misled in their actions and attitudes relative to these problems. As a social fact we know that things are little understood. As teachers, we know what the results are along these lines. In several years' experience as a teacher of history in secondary and college grades of work I found a deplorable ignorance of vital things relative to our national life, students in our elementary schools who had never discovered that there was such a thing as necessary sequence and as interdependence in human society. In other words, society as an organic thing did not exist for them. It was

not that they were not capable or that they were too immature. They were generally mature, and they soon showed they were capable of grasping those easiest of all things in the range of history to teach.

Second, there was a deplorable dislike of history and an aversion to contemplating the thought of further history work. Yet these students grew to like this field of study when they found that there were law and order in the historical field, and that it was not a matter of memory work but of appreciation and understanding. Once, as an experiment, I took a class of some sixty students, and as a part of their work studied with them dry-looking tables of immigration and population, getting an idea of the laws of increase, and finding the causes of the variations in rates of increase in races and regions. The interest the class manifested in what, on the face of it, would seem very dry material for students of that grade of work, was a revelation as to what might be done in rationalizing valuable historical matter.

The record runs that more teachers fail in their history examinations than in any other subject and in such an overwhelming manner as to create a problem. The nature of the subject, when adapted to the ages of the pupils, should not be so much more difficult than other subjects as to make this difference in resulting scholarship.

Poor text and poor teaching. — The poor results above noted are no doubt due in part to poor teaching but mainly to poor texts. The first defect lies in the kind of content or subject-matter selected and embodied in the texts; for the writers have had little perception of the comparative value of the material for cause and effect purposes. Instead of testing their material by the criterion, what is most

determining? and what are the really greatest episodes? matter has been placed in the books because it has been the fashion of previous history writers to put such and such topics in. In other words, our history for schools has been on a traditional basis rather than on a rational. It has been chiefly military and political only, and it has handled these things in a lifeless, merely enumerative manner. And while, recently, some considerable social material of another kind has been put in, it has remained aloof from the other as a kind of outside spectator. As a criterion to serve as a guide for history purposes in general, I should say this: Emphasize only such episodes and conditions as have had a very perceptible influence in determining our present institutions and organizations.

There is also a great defect in the texts, in that they devote too much time to events remote in time and too little to those which are near. Our histories have commonly proceeded after the spirit of the statement the philosopher Hegel made relative to the Chinese: A Chinaman is first good for something when he is dead. So our textbook makers have supposed that only dead history is good history, and the deader the history the better. If it was a matter of general history, they would spend most of the time on ancient history; and if either modern or ancient were to be omitted it would be the modern. If it was a case of American history, the colonial would get the benefit of the greater time as compared with the national; and some authors have seemed to think that this present end of our national history is hardly worth mentioning. Both kinds of procedure are wrong. The present is the only time worth anything for the average man, and the past should be given him only in so

far as it is made to bear a vital relation to the social situation now confronting him. The average man gets only a little time to give to the study of social matters, and he should be led to those which are important to him as directly as possible.

The third defect of texts is in the matter of organization. Most of our histories show a sad lack of organizing principle. Many texts are mere jumbles of things. Many texts written for secondary schools by reputed historians are mere epitomes of all the incidents that have in any way got connected with our national career. They present good illustrations of the original chaos of matter. They contain many hundreds of topics, which, in their arrangement, have little relation to each other, as a general thing. They are strung together as they are just because their events happened in that order. They are mere chronologies, not history. They have not been rationalized.

Process of reconstruction. — Reconstruction of history for better teaching purposes would naturally fall along the lines of the criticisms which are made. This reconstruction must be made either by the teachers of history as they take up the work with the classes, or it must be made by the text writers. And, since we teach mostly by texts, we have to think that the writers will have to do the reconstructing.

First, the merely traditional matter should be eliminated. According to the criterion, anything is in the merely traditional class which has not quite visibly affected our current of development. By this standard there should be relegated to the rubbish heap much of the matter relative to discoveries and explorations; about all that relates to the record of single colonies; much under the head of colonial wars and Indian

wars; many of the events leading up to the Revolutionary War. In the national period we might cut out much that has been put in relative to national presidential campaigns, election accounts and administrative events; a large part of the military records in the way of detailing single battles and unimportant campaigns; all the so-called literary history, because we have literature in the schools apart from history; much that has been introduced of an intricate nature under foreign affairs in the period following the beginning of our present constitutional government; and much of the merely political reconstruction chronicle. By means of eliminating this material, which is inherently worthless and uninteresting, and for our national development, in the light of our present institutions, is inconsequential, we should gain much needed time for either better historical matter or for the introduction of the vocational lines into our schools. Other subjects besides history must undergo a like surgical operation for the same reasons.

The second process in reconstruction is the incorporation of material of a more vital nature in the place of that eliminated. To demonstrate what this would be and how it should be worked out, would be to write a text. All that can be done here is to indicate some of the more important things commonly omitted or left undeveloped. In the pre-national period there should be a larger development of the economic causes of the discovery of America and of the so-called Revolutionary War. The latter, in particular, is still undeveloped in the best of our school histories. The only place where there is adequate treatment of this phase of the struggle for separation is in industrial and economic histories. Another colonial matter not enough developed is

the development of religious toleration and the beginnings and growth of our American system of entire separation of church and state. Anyone who cares for freedom of thought must be sensible of the advantages of the American system over the old system of state religion, and this is emphasized by the fact that the biggest struggles for human emancipation right now are going on in Europe to put those states on the American basis.

Colonial history should include a treatment of the formation of our national life, which is entirely omitted from our histories. No one thinks it worth while to explain that our Union was made possible only because the thirteen colonies had more things in common, had more similarities, than they had differences. Yet there is no historical instance of so many as thirteen states which were unlike in race, language, political and social institutions, and in literature, religion and traditions, ever getting together and forming a perpetual union, even under the stress of a common enemy. This is the fundamental set of facts in explanation of the formation of the nation; the Union cannot be rationally explained without them; yet they are hardly mentioned, much less developed, in our texts.

In the race for the possession and control of America, there should be some development given to the consequent significance of the outcome for civilization, and especially for American civilization. Fiske called the capture of Quebec the turning point in modern history.

A more adequate treatment of the industrial and political system which prevailed at the time of the struggle for independence than is now given should be made. A good all-around study of existing society at that time would be

far more valuable than the attempt to detail the successive events in all the various colonies. Particularly I think the home and domestic system of production which then prevailed, in its significance for labor, consumption, and possibilities and restrictions of life, should have an extended treatment. A vivid description of the productive processes which were carried on on the plantations under slave life, on the small farms in New England by men and women under their primitive division of labor; of nail making, shoe making, cloth making and garment making, etc., would go far to make the life of that period real, and to give a grasp of the dependence of the various divisions of labor on each other.

In our national period, our histories are deplorably weak in their development of the economic background of our national life, and in showing the rational significance of that part of the economic matter which is introduced. It is a stupendously significant thing that our young people can and do get out of from one to four years in history study without knowing there has been an industrial revolution, and without knowing its vast significance for human life.

Yet, who could explain, in any scientific way, the factory system, along with our present system of production in factories and on farms, and the consequent difference it makes for life to-day as compared with life before as seen in colonial times and on the frontiers; the appearance of new transportation and communication agencies; of the great daily, weekly and periodical press; of great cities on every hand; of the appearance of gigantic organizations of labor and of capital, with their consequent conflicts and problems, and of many other phenomena, without taking

up in an expansive and systematic manner the industrial revolution? It has made a new order of things, and you can give no history during the last hundred years in any advanced nation without dealing with this subject; for it was truly revolutionary, in that it transformed society in spirit and organization in fundamental ways; and there is not a phase of life that has not been and is not now affected by it.

It is the machine age we are in, the age of inventions. This distinguishes our age from all preceding ages, even more than do our political peculiarities; not only in the fact that it exempts men from doing much of the drudgery connected with production by their own muscular power, but in the fact that it has specialized and differentiated society more in a century than had been done in all preceding ages by all the agencies men had previously devised; and further in the fact that the special forms our problems of society take to-day have their explanation in the appearance of these revolutionizing inventions.

Another indication of the short treatment of economic matters in our histories is the fact that our students have little conception of the causes, nature, and importance of a great social phenomenon which has occurred every ten or twenty years in our national life, and that each time it occurs shakes our social fabric to its foundations—what we call panics and depressions. It is an educational misfortune, that we should spend from one to four years in studying, or studying about, human society, and yet turn out people for citizenship who do not know the common causes of one of the most ordinary and important events. Why not write a chapter on panics in the text, describe and treat all our

important panics in such manner that the similarities and consequent explanations would appear, so that the man and woman would be in sight of giving a scientific account of them and could help to shape human affairs for their control? Is it because the text makers do not understand the subject or because it might destroy the artistic symmetry of the book? But if history is of any use it must give such an account of affairs that we may understand and so be able to control them. Our histories, if they are going to occupy the field, must do the necessary things.

In the same manner, we should need to give an adequate economic account of the rise of monopolies, of their significance for life, of their causes in the peculiarities of the times, of their extension into the various lines of transportation, manufacture, distribution. We should need to show the connection between modern business life and government, so that the citizen might see the exact place and function of government in organized society. I venture to say that most of our people have no sort of notion as to what the legitimate function of government is, and, consequently, are all at sea as to where government should begin and end in relation to businesses of all sorts.

A great uncultivated gap in our political history exists relative to our political parties. I have found few pupils, who have come to me from the schools, who have had an idea of the meaning of parties in our history. They are just things to study about but they do not mean anything to them. I think it is easy to maintain that the place to begin to study our government is with the parties, and that we cannot know much about why our political history takes the course it does without seeing that those organizations

which control the avenue to governmental positions control the government and government policies. In other words, we have to get down to a study of party organization by means of which they control nominations and elections. This is more indispensable as a matter of understanding our government now than a study of the Constitution of the United States.

Organization of history material. — As to the matter of organization of history material into textbook shape a great deal ought to be said. Of course, the average teacher can do little more than reproduce the matter of the text in just the shape in which it is placed in the text. The chop-feed method of treatment of our histories in general, therefore, is a bad method of class presentation. The logic of events is lost because of the hop-skip-and-jump procedure from the political to the industrial, then to the religious, to the literary, etc., and this every ten years. There is a discontinuity that is bewildering. History is shot full of gaps. Neither teacher nor pupil puts things together in a causal way.

Our texts would do better if they should pursue the continuous-development method of presenting matters, that is, take up one line of interests or activities and carry it through the course of a whole epoch or period without interjecting between its parts in the course of the period other kinds of interests and activities. I have tried this and found it works in an admirable fashion. To illustrate, I will name the topics I carried through continuously from 1789 to the Civil War, or such as extended through the whole of the period: Organization of government and parties; struggle for commercial independence; westward expansion of

territory; development of population and transportation facilities; revolutionizing inventions and processes; political parties and doctrines; establishment and growth of protective tariff; some problems in finance and banking; development of the slavery issue; chief international problems.

And when we reflect, we find that this continuous development of a single series of events or interests is just the sort of knowledge the citizen needs. He needs to know the tariff history in itself, the financial history in itself, party history in itself, and so on. He must know it this way in order to understand it. If it is not developed that way for him in school he is likely never to develop it.

The briefest kind of sketch of this matter deserves that some attention should be paid to adaption of history to the different ages or educational stages. Mainly, I think, the adjustment should consist in pedagogical devices rather than in the matter; although I am aware that the exponents of the concentric-circle view have been led to admit that in covering the circles of history, each time in a more exhaustive manner, really new material is given. Yet I maintain that the object is the same for all ages, namely, to give as good a knowledge of the working of the child's own society as the stage of mental development will permit. Essentially the same matter of community life must be given in order to secure this object, although the form which the material takes will vary widely. A knowledge, in the larger aspects and in the social relatedness, of our social processes, for instance, can be given quite young children so that they can see the work and significance of mills, railroads, telegraph, farmers, schools, government, and so on, for our lives. The same material later on is more systematized and put under

the reign of principles. But in each stage we should avoid wasting time on mere frills under the mistaken idea that the child cannot grasp vital social facts.

IV. THE SOCIALIZATION OF OTHER SUBJECTS

To undertake to deal adequately with all the subjects in the schools, in order to show the method and results of socializing them, would require more space, and certainly more ability and insight, than may validly be claimed. A few suggestions, however, may not appear inappropriate.

Language study. — The function of language, on the associational side, is to act as a medium of communication of ideas between members of the same society; on the individual side, it is to serve as a means of getting information from records in which the knowledge is embodied. The one thing essential to the individual, in order to be able to accomplish either of these two things, is the possession of and the ability to use the language which is the vehicle of the ideas to be obtained or communicated. Whatever factors of instruction and elements in subject-matter are essential for the attainment of quick apprehension and clear accurate expression, by means of language, should be found in the schools. Whatever does not directly give aid to this end, in a very fundamental way, should be eliminated.

As language is in the nature of a social device, it is to be held in much the same regard as any other human agency with which to get work done. In taking up the use of tools and machines, the design is to get the largest facility and skill in their use in the shortest possible time. Expedients are not set up with a view to prolonging the period of

apprenticeship. Doubtless this would be the reasonable criterion to accept as the criterion of language.

The above remarks would lead us to say that our method employed in the acquisition of words for use, either in the way of speaking or writing, should be that which will bear us to the desired end in the shortest time. If a short cut can be devised, so much to be thankful for, as individuals are saved time to put in on something else. If some one could devise a way by which to learn to talk and write in half the time now required, what true educator would not rejoice?

Two chief methods are employed to secure language ability, along with discipline, culture, and other ends. The first has been an extensive study of grammar, formal grammar. Whatever may be the efficiency of grammar in gaining for pupils the other ends, it possesses little in securing language skill. "It is now generally admitted by scholars that the chief reason for the study of technical grammar is not its practical and direct bearing upon expression, but the insight it gives into the logic of language. Prof. W. D. Whitney voices the general sentiment among scholars when he says that the leading object of technical grammar is not to teach the correct use of English, but that grammar is the reflective study of language." (L. E. Wolf, "English in the Elementary Schools," *Ed. Rev.*, 28, 162.)

Formal grammar is to the practical acquisition of language what formal logic is to the establishment of our common thought processes. Both are witnesses after the fact. Almost all is over when they appear on the scene, and they can influence the case but little.

The other method used to attain efficiency in language is constructive language work. This is the really legitimate

and effective means of the accomplishment. Expression of the learner's own ideas is the very core of this method, expression of his thoughts according to the rules and forms of good usage. Along with this comes another valuable fact that observation and expression of things and processes lying in the immediate social and physical context are far more serviceable in creating or cultivating ability to communicate ideas directly and accurately than the usual slavish imitation of masterpieces. Masterpieces of literature are valuable stimulants for the imagination, when rightly used; they are appropriate to serve as models of usage and form, but, incessantly followed, they mold the mind to their form and repress individual self-expression.

When the average person, if writing an essay, will choose such abstract subjects as war, peace, ambition, etc., rather than some phase of nature or life which touches him every day; or in conversation has not the power to talk interestingly one minute about the objects and conditions which surround him; it is evident that constructive language training has before it a vast field and rich possibilities in opening up the field of critical observation of near-by phenomena and of their analytical and descriptive expression. It may thus become a means not only of securing a command of direct clear English, but also of developing the powers of observation, and of accumulating a fund of most useful information, for our most useful facts lie within our own horizon.

In the light of our criterion, therefore, we need to insist on emphasizing the constructive and self-expressive side at the expense of merely formal grammar. We should not go so far as to say that the latter should be abolished from

the schools, but that it should be used in the process of getting pure speech established as a habit, that is, subordinated to constructive language work, and as much as is needed, for that purpose, incorporated in the constructive language process. Most of our courses of study follow this plan, but then take two years at the close of the elementary period largely to be devoted to formal grammar. This puts it on the disciplinary basis, views it as an end in itself, rather than as a contributive aid in securing the vehicle of expression in the speediest manner.

By a careful selection of just the essential principles of grammar to aid in constructive language getting, and a scientific subordination, a great deal of time will be saved for the needed training matter which is knocking for admission. Here is a place certainly where much time can be gained.

Spelling. — If so much can be admitted, as within reason, when the method which is to be brought to bear on language, for its acquisition, is under consideration, shall not as much be conceded when the nature of the language to be taught is in question? In the phrase "nature of the language" is meant its power of resistance, or the inherent difficulty of control. Of the various modern languages, it may be said that they differ greatly in their power to resist the learner. These differences very largely arise out of the arrangement of the words in the sentence, pronunciation, and especially the amount and nature of inflection to which they are subject. The English language, which most closely interests American educators, is relatively simple in the last of these particulars, and as Professor Brander Matthews writes, it is thereby peculiarly fitted to become the world-language.

But, in another particular, it is exceedingly difficult of attainment. A multitude of words are subject to a spelling which is anything but rational. Many letters are contained which represent no sound, and which a learner would never guess were present from hearing the words which contain them pronounced. Our language, therefore, not only subjects the foreigner taking it up to incalculable work, but requires of our own children a prodigious amount of memory effort, which is superfluous, because it is irrational. An industrial community which keeps in use patterns of machines which have been greatly improved on by later models or have been entirely replaced by newer inventions, would be termed unprogressive and industrially wasteful. Municipal transportation companies have been known to displace one system of motor power for another, notwithstanding the former was in good condition, because the latter had strong marks of superiority. Manufacturers are willing to cast out old machines for new when time-killing features have been removed. Economy is a fundamental law in business enterprise. Waste in time and material are to be eliminated whenever detected.

One of the greatest benefits which could be conferred on the schools would ensue if spelling could be put on a really rational basis. The ideal is of course that all words should be spelled just as they sound. This would reduce spelling to an exact system of phonetics. Spelling would be a simple and easy matter if sound values were preserved as the mark of correctness. As a machine or tool to get control of as quickly as possible, it would be thought that all rational persons would at once agree that language work should speedily be put on this foundation. Such is the conservatism

of the English race, however, that many otherwise intelligent people oppose the suggestion. The proposal has been made time after time only to die still-born. It will be a long time ere the race will move up to that plane where such a sweeping reform may be made. Gradual introduction of spelling reform is the most which can be hoped for.

The Simplified Spelling Board, operating under the Carnegie endowment, takes advantage of the well-known facts in the history of the English language, that the present illogical and inconvenient forms of words were fastened on the language, in the early days of printing, by the typesetters and proof readers, who found it easier to spell by some sort of system than entirely arbitrarily, but who did not feel at liberty to spell by sound or to use the letters which most clearly produced the words. Later, the lexicographers came to the aid of the proof readers in fixing the form. Particularly, Dr. Johnson exerted a superior influence in this respect. He followed the proof readers' method of spelling, and simply settled many disputes among them by choosing the one which was oldest and worst. In effecting this, Dr. Lounsbury says that "propriety was disregarded, etymology perverted, and every principle of orthography denied; and that men of culture blindly followed in the wake of a movement which they had not the power and probably not the knowledge to direct."

Accompanying a list of three hundred words which the Simplified Spelling Board has sent out, to which simpler spelling may be applied, is this statement, which seems to contain the principles to guide in the work of reform: "The rules and analogies which underlie English spelling can, however, be ascertained and stated, and the exceptions

can then be clearly seen. The next thing is to reduce or abolish the exceptions. The process has worked well with many words. Why not continue it with other words? The matter is really very simple. When the rules and the analogies are understood, any intelligent person can see for himself when a particular spelling deviates from them. Thus, anyone can see that *binn*, *bunn*, *butt*, are out of accord with the rule established by the innumerable words like *pin*, *pun*, *cut*; that *centre*, *metre*, *fibre*, etc., are out of accord with the rule established by *canter*, *number*, *timber*, *diameter*, etc.; and that *favour*, *honour*, etc., are out of accord with the rule established by *error*, *terror*, *minor*, *major*, *editor*, *senator*, etc. So likewise *dript*, *dropt*, *snapt*, *drest*, *prest*, etc., tho now actually less common than *dripped*, *dropped*, *snapped*, *crossed*, *dressed*, are more in accord with the prevailing analogy of *p* or *s* before a *t*-sound, which appears in *apt*, *host*, *boast*, *best*, *nest*, *rust*, etc.; and in the old spelling, still retained, of some preterits and participles, as *crept*, *lost*, *swept*, etc., as well as *dreamt*, *leapt*, etc." (Circular No. 2, March, 21, 1906.)

The spellers and the spelling process in the schools need simplification. The constitution of the spelling-books has been greatly improved in recent years, but improvement might still be made towards reducing the list of words not frequently used, or hardly ever used, replacing them with those nearer to the average child's environment. There is a good work for some one with great patience and wisdom in the construction of a real child's dictionary.

One way to bring the spelling lessons near the child's actual vocabulary is by a larger use of the readers and texts as sources of words to be spelled. This is a very

practical source, for the words spelled are obtained in their contextual relations, so that the meanings are attached to them. The child is not spelling an abstraction, then, but something which he is using. The association is valuable as a memory aid. Perhaps an alternate use of the spellers and other schoolbooks, in spelling exercises, might act as a corrective of spelling-books. Throwing words into cognate groups, such as farming terms, mining terms, geographical terms, etc., might prove serviceable in offering the associational factor.

Geography. — Geography, as it has been constituted, and is at present, for the most part, could be described aptly as the conglomeration of everything and the unification of nothing. It has certainly stood in need of the application of a rational criterion. It may be that when our studies get properly differentiated as nature study, social study, language study, number study, etc., we shall discover either that geography has no place at all because its facts have been absorbed by the others, or that there is a very definite sphere of valuable knowledge left to be taught.

Geography is a study which, without the social criterion as a measuring-rod of value to apply to matter coming up for inclusion in it, is liable to be pretty much all one thing or another, or a jumble of both. A geography teacher in a Normal School asked me recently if I did not think that geography should be just a study of geology. This expresses the tendency to make it all a certain thing. Another teacher of long experience in Normal School work made a hodge-podge of it. Her pupils rushed desperately and blindly after forms of government of past nations, religious doctrines of obscure people, polygamous practices of the

Innuits, etc. They had no notion of what they were doing. They were just doing work for mysterious reasons. It is conceivable that some one else should rush to the extreme of making geography almost wholly a social study and merely exploit the various phases of society as such. This would be as bad as to make it all geology.

In my estimation, geography should have as its foundation the idea that community life is to be explained by its physical settings. It should bind the physical environments with the social groupings. It should show how a given community is related to its material surroundings, that is, the community is likely to be what it is because the natural environment is what it is.

An illustration or two may explain this meaning. Chicago is the product of a particular region. It is the expression of the physical possibilities of that area centering in itself. Its location in that area explains it. It is at the point of the lake system and at the mouth of a river that formerly connected it by portage with the interior river system. By reason of this it became a fur market, then a grain market and distributing point; after the railroads entered, a livestock market, a manufacturing and wholesaling center, etc.

It was made by its natural transportation possibilities in the beginning. Then when railroads arose, they centered there because it had become a large point and because freight vessels from all northern points cleared there, making it thus serve as a depot and distributing place of a still larger region than when dependent on rivers and lakes alone. So now Chicago is what it is because its splendid transportation system enables it to exploit the various

sources of wealth of a wonderfully large and rich contiguous region. The geography of Chicago would consist in taking up its dependence on the environment, and its chief interests; to show how they reach out into the surrounding region, draw in products from that region, and in exchange send back other goods.

Or take the case of New York. Its relation to larger and larger areas, as the transportation connections developed, explains it. Naturally it had one of the best locations on the eastern coast. The ocean connected it commercially with Europe, while it had access to the interior by way of the Hudson River and Lake Champlain leading to Canada, and by way of the Mohawk River valley leading to the West. In course of time these things would have made it the pre-eminent city of the East. The Erie canal more speedily made it the leading city commercially. Cheap freight rates were established to the West by water, and New York became the chief commercial connecting link with Europe. As in the case of every city, large or small, the numerous lines of businesses established there were merely central ganglia, connecting by transporting ways with the raw material resources throughout the contiguous region. To explain New York would be to trace the origin of these various kinds of business there, in answer to some demand of the region about.

A complete geography would be the exposition of community after community in the light of the above suggestion. Evidently this would be impossible in the time at the disposal of the average individual. It would be of questionable value anyway, perhaps, as compared with the valuable things which must be done. But the idea is desirable and

imperative as securing the very fruit which the child needs as the result of the study of geography. It should know those things. The method unifies the matter which is to be studied.

Now, the results may be obtained in either of two ways. Types of communities might be worked out until the world were fairly well understood. That is, a succession of typical communities could be studied which would afford the essentials of the world's geography.

As an alternative to this a world geography, or as much less than that as may be demanded by the circumstances, might be developed by beginning with the local community, and from that ascending through a series of larger and larger areas until the total world were involved. Some such line of procedure as that indicated below would serve to furnish the valuable knowledge the child needs, and also, at the same time, to secure a progressive and systematic subject.

1. The study of a small local area, such as a farm, to get the ideas of space relations established and of human beings in relation to the soil on the one hand and to society in the shape of markets on the other.

2. The study of the nearest community centered about a trading point in its various phases.

- (1) What natural advantages caused people to locate there and enable them to sustain themselves.

- (2) The occupations of the people based on the natural advantages and resources.

- (3) Other occupations which have grown up on the basis of advantage of the location in relation to the larger world.

- (4) The kind of people as to nationality and race in so far as these things affect the community life.

(5) Transportation facilities, natural and artificial, as connecting the community with other communities and as affording the advantages of markets for products and of sources of supplies.

(6) The effect of the occupations of the community on the people, their habits, customs, education, government, religion, cultural activities, etc.

3. The study of the smallest distinct physical division of the state or nation, that is, where physical features, climatic conditions and resources and products are similar and the whole may be unified on the basis of the causal conditions. Of course this region should be the nearest one. Some of the leading considerations would be as follows:

(1) The topography in its area, configuration, altitude, and water courses, showing how each of these bears on the distribution of population.

(2) Climatic conditions in temperature, length of seasons, and amount of moisture precipitation with reference to farming and other occupations, their conditioning of kinds of occupations, products, etc.

(3) Soil and natural resources, such as forests, fish, mines, and waterfalls, in their significance for farming, lumbering, fishing, mining and manufacturing industries. The kinds of soil and the fertility of the soil would further differentiate occupations.

(4) Populations, races and nationalities as to origins and characteristics, only in so far as they are necessary to explain differences which retard or promote the regional well-being and in so far as they illustrate the larger world.

(5) Industries, in their bearing on the location and distribution of people, their reasons for particular locations,

their relation to the life of the region, and their conditioning influences in the establishment and maintenance of commercial relations with the larger world.

(6) Transportation and communicating facilities, in their bearing on the prosperity and satisfactions of the region and their influence on locating larger collective populations for commerce and manufacturing. In connection with these last two points much supplementary reading might be done. This is a good place to get out into the larger world by following the threads of communication and transportation to see how they really relate and unify the region with others.

(7) Influence of the pursuits and occupations on the life of the people of the region in the way of customs, habits, dress, education, religion, culture and government.

4. The study of one or more regions, either contiguous to or remote from the preceding, in the various aspects indicated above, for purposes of expansion and comparison of ideas.

5. A physiographical study of the United States, calling attention to the similarities to and differences from the regions studied, and showing the larger unity through identity of interests and transporting systems.

6. An expansive study, by means of physiographical maps, of the various continents, indicating their connections with America by commercial routes, the chief products they interchange with us, the bearing of atmospheric and oceanic currents in so far as they affect trade and communication.

To the degree to which the individuals in training recognize a vocational object before them their geographical work would naturally emphasize those aspects which lie most in line with their future interests.

Physiology. — Much deserves to be written on this sub-

ject. Hardly anything touches the vitals of life and society more closely than the things which should be taught here. Our textbook writers have been chiefly interested in giving a scientific account of the human organism, and secondarily concerned with the relation of that mechanism to the environment. It would evidently be a great advantage to develop the latter phase, even at the expense of the former, if necessary.

If we stop to reflect that the health of our municipalities depends on pure water supplies, good sewer and drainage systems, properly constructed houses relative to heat and ventilation, clean streets and market places, air free of smoke, pure food and milk, etc., and that its maintenance depends on the intelligent interest and coöperation of all the people, it becomes apparent that specific information along these lines, as well as on others, is imperatively demanded. Half of our population is now living in compact groups. Soon a far greater portion will dwell in cities. For the sake of the health of all, it behooves our schools to open up this practical side of physiology and hygiene.

It is also becoming apparent that many of these topics are of concern to rural regions. So long as farmers empty slops and sewage about the wells which contain their drinking water, dig wells in barnyards to be used alike by man and beast, maintain outdoor closets so vile and filthy as to stifle those patronizing them, leave dead animals to rot unburied near dwellings, encourage conditions which breed germ-transmitting flies by the millions, defy laws of air space and ventilation in homes and school buildings alike, there is ample confirmation of the assertion that our rural schools should see a like extension of these subjects.

It would seem that a very practical and highly interesting book for use in the schools could be written which should devote at least one half of its space to depicting the importance of maintaining sanitary conditions and of describing in graphic detail the various devices in use to secure them.

Here, for example, would be a very practical way to combine the physiological and the sanitary side, relative to circulation of the blood and the lungs: 1. The circulating system, and what the blood does for the body. 2. The lungs as the purifier of the blood, and the necessity for pure air. 3. External conditions which pollute the air. 4. Devices, mechanical and social, by which good conditions are to be maintained. A chapter could be given to each heading, or at least quite an expansive treatment, thus affording the necessary knowledge of facts and their relations.

Or a good treatment could be given the subject of foods and digestion, such as is suggested in this series of topics: 1. The stomach as a chemical laboratory. 2. Digestion and its relation to other bodily processes, such as circulation, etc. 3. The chemistry of foods, their choice, preparation, preservation, as bearing on the chemistry of the digestive processes and on health. 4. Sanitary conditions and surroundings of food: cleanliness, disinfection, flies as food polluters, and methods of exterminating them by controlling the conditions which breed them, etc.

Other bodily processes which are essential to health and service could be treated in the same practical manner.

CHAPTER XIII. SOME SOCIALIZED PROGRAMMES

Difficulty of constructing programmes. — It does not seem advisable, for various reasons, to attempt to construct courses of studies for the schools. First, because there is such a great diversity of communities, each with its dominant interest, which would make it imperative to construct as many programmes of study as there are varieties of community interests. I believe this volume furnishes the principles for constructing a course of study for any community, but I certainly do not possess the detailed and technical information involved in each of these regions to enable me to work out a suitable schedule for each one. Second, a thoroughly worked out schedule would await the socialization of the several subjects now taught in the schools. Since this has but just begun, a complete programme is at present evidently impossible. Conservatism, lack of means, etc., on the part of schools and communities would constitute barriers to the adoption of ready-made courses, however good.

I shall content myself, consequently, with suggesting a possible course for agricultural regions, with presenting one proposed for manufacturing communities, and two German continuation school courses. The latter are exhibited for the purpose of showing how the various elements are combined in the courses, and how some of the subjects are socialized and pointed toward the vocation involved, not to suggest that they are to be adopted. It will be seen also that they provide for only eight or ten hours per week.

German continuation school courses. — The following two courses are those in use in the continuation schools of Munich, Germany, as reported by Professor Hanus (*School Review*, 13, pp. 681-2). Relative to the item of religion, Professor Hanus remarks that it is taught perfunctorily by the priests or pastors of neighboring churches and, in his estimation, the instruction could be given much more effectively in the churches.

“CONTINUATION SCHOOL FOR CARPENTERS AND CABINET MAKERS.

Subjects of Study	Hours per Week		
	Winter	Half Year	Summer Half Year
	Classes I to III	Class IV	Classes I to III
Religion.....	I	.....	I
Arithmetic and bookkeeping (1).....	I	I	I*
Reading and business composition.....	I	.....	I*
Studies in life and citizenship.....	I	I	I
Drawing.			
(a) Carpenters.....	6	6	.....
(b) Cabinet makers.....	3	6	.....
Practical Technology (2).			
(a) Carpenters.....	2	.....	.....
(b) Cabinet makers.....	2	.....	2
Total.			
(a) Carpenters.....	12	8	3
(b) Cabinet makers.....	9	8	9

* Alternately.

(1) As before, the work in arithmetic consists of the actual problems of the trade concerned, here the problems actually to be solved by carpenters and cabinet makers.

(2) Study of woods, tools, machines, and their care and use.

Shop work.”

"CONTINUATION SCHOOL FOR BUSINESS APPRENTICES.

Studies	Hours per Week			
	Pre- para- tory	First Year	Second Year	Third Year
Religion	1	1	1	1
Arithmetic (1)	2	2	1	1
Bookkeeping			1	.....
Banking and exchange			1	.....
Business correspondence and reading (2) ..	3	2	1	1
Commercial geography and study of materials (3)	1	1	1	2
Studies in life and citizenship (4)		1	1	1
Stenography		2	2	.....
Writing	1	1	1	.....
Total	8	10	10	8

(1) All the problems are taken from the actual business in which the pupils of a given group or class are engaged.

(2) Reading in general, but much of it pertains to business careers and to the particular business in which the pupils are engaged.

(3) The raw materials and also the manufactured products are studied. One group, instead of this, received instruction in money, banking, and finance.

(4) Personal and public hygiene: duties, rights, and opportunities of the apprentice; decorum; development of trade; transportation and communication in Germany; trade organizations; capital and labor; chamber of commerce, and industrial exchange; civics, made as concrete as possible."

Vocational schedule for elementary schools.— The following is a syllabus of a vocational course for elementary schools, as proposed by J. P. Haney (*Ed. Rev.*, Nov., 1907, Vol. 34, p. 343).

"ENGLISH.

- 6th year. Composition: Oral and written.
Reproduction: Reports and descriptions; business letters.
Penmanship: Exercises to secure speed and legibility; business forms and copy.
Reading: From readers and other books.
Spelling: Selected words; use of the dictionary.
- 7th year. As above.
- 8th year. As above.

GEOGRAPHY.

- 6th year. United States and other countries of North and South America; reviewed with particular reference to resources, industries, and occupations, products, commerce, and means of transportation.
- 7th year. Europe, Asia, Africa, and Oceanica. Countries and chief cities, with particular emphasis on industries and occupations, products, commerce, and means of transportation.

HISTORY.

- 6th year. American history from the discovery of America to the Civil War, with particular emphasis on the industrial development of the country, on inventions and their results.

ARITHMETIC.

- 6th year. Common and decimal fractions and their per cent equivalents; problems involving the mathematics of shop operations.
- 7th year. Percentage and its application; simple interest; problems in mensuration and others involving shop operations.
- 8th year. Ratio and simple proportion; problems in inventional geometry, and other problems involving shop operations.

FREE-HAND DRAWING.

- 6th year. Drawing familiar objects in outline; study of simple foreshortened faces, and quick sketches to give practice in judging proportions.
- 7th year. Elementary principles of perspective practically developed; sketching foreshortened cylindrical and prismatic forms in outline, with practical applications in drawing from simple machine parts.
- 8th year. Perspective drawings from various details of construction; frames, doors, etc. Many quick sketches of familiar objects followed by memory drawing of the forms in different positions.

MECHANICAL DRAWING.

- 6th year. Elementary principles of constructive drawing; simple working sketches, lettering, and dimensioning.
- 7th year. Working sketches and mechanical drawing; use of instruments; scale drawing; lettering and dimensioning. Perspective drawings developed from plans.
- 8th year. Mechanical drawings from simple pieces of machinery; working sketches; ink drawings. Perspective drawings from plans. Various practical problems, especially in the making of well-made free-hand working sketches.

WORKSHOP PRACTICE.

- 6th year. Principles of elementary wood working. Practical exercises in joinery; simple useful models, with particular emphasis on accuracy of construction. Elementary exercises on the lathe. Use and reading of working drawings.
- 7th year. Simple problems,— pattern making, involving the use of the lathe. Special emphasis on care and sharpening of tools, and on methods of shop-work procedure. Study of simple specifications. Visits to shops in operation. Use and reading of working drawings.
- 8th year. Joinery and pattern making, involving use of the lathe. Simple exercises in metal-turning and in chipping and filing. Study of working drawings, and simple specifications. Lessons in care of tools, and the elementary principles of shop economics and discipline. Visits to workshops in operation.

PHYSICS.

- 6th year. Properties of matter; forces and states of matter; study of mechanical powers, particularly in relation to industrial work. Mechanics of liquids and gases, illustrated with practical experiments.
- 7th year. Study of heat and of the elementary principles of construction of the steam engine and of the gas engine. Sound, laws of its production and propagation. Different types of telephones. Light, source and propagation. Photographs, their nature and making.
- 8th year. Electricity and magnetism: Nature of fundamental electrical apparatus used in the arts; cells, electro-magnets, dynamos, etc. The chemistry of combustion; destructive distillation; manufacture of gases; slow and rapid form of combustion as in rust and explosive compounds. Power and its transmission. All principles to be developed in direct relation to industrial problems.

NATURE STUDY.

- 6th year. Study of tree growth, and uses of wood. Special emphasis on employment of wood in art and industry. Other plant products useful to man — cotton, linen, etc.; their methods of preparation and manufacture.
- 7th year. Further study of principal natural materials used in art and industry; wool, coal, oil, clay, and principal building stones.
- 8th year. Metals; their source of preparation. Nature of steel, methods of tempering and preserving; alloys, their composition and use; brass, Babbitt metal, pewter, etc.

BUSINESS LAW.

- 7th year. Elements of business law; nature of contract; relation of employee and employer.
- 8th year. Partnership; legal forms; nature of lien, etc.

PHYSICAL TRAINING.

- 6th year. Gymnastic exercises and games; elementary lessons in hygiene; effects of alcohol and narcotics.
- 7th and 8th years: as in 6th year."

It is suggested that the course be organized as indicated in the following time schedule, which contemplates seven hours' instruction each school day.

	Minutes per Week		
	Sixth Year	Seventh Year	Eighth Year
Opening exercises.....	75	75	75
Physical training.....	70	70	70
English.....	320	260	120
Penmanship.....	75	-----	-----
Geography.....	60	60	-----
History.....	60	60	-----
Arithmetic.....	180	120	120
Drawing, free-hand.....	200	200	200
Drawing, mechanical.....	180	180	220
Shop work.....	520	520	740
Physics.....	120	120	120
Nature study.....	120	180	180
Business law.....	-----	120	120
Unassigned.....	120	135	135
	2100	2100	2100

I present this suggested programme as a sample of the earnest efforts being put forth to better our present schools by the introduction of the vocational element. It appears to be a very valuable contribution towards reconstructing the programme. Two remarks may be made about it: First, it is suited chiefly to industrial regions, making little or no provision for commercial, agricultural, or other non-industrial elements of the population. It is a vocational course of the industrial kind. Second, some of the informational subjects which accompany the vocational element and in content are directed toward it would have to be filled with a somewhat different subject-matter, were any other than an industrial community contemplated.

Course of study for rural schools. — The following outline may be taken as suggestive of what socialized education would be for agricultural communities. Only the chief topics are included, since the purpose is to indicate broadly what elements should enter, not to enumerate in a detailed manner all that should be given. It would be the business of instructors to choose out of the various sciences only those portions which would be necessary to impart the essentials in each given item.

I. Tools of knowledge. To be made agents as soon as possible in actual attainment of information.

II. Vocational knowledge of the agricultural sort.

(1) Chemistry of the soil — especially for boys.

(2) Chemistry of foods — especially for girls.

(3) Mechanical principles and care of tools. Principles of levers, pulleys, etc., involved in farm machinery. Simple carpentry, cabinet making, and blacksmithing for purposes of building and repairing. For boys.

(4) Domestic economy, housekeeping and floriculture.
For girls.

(5) Plant culture and horticulture; for boys chiefly.

(6) Animal culture.

(7) Use of products and by-products.

(8) Relation to markets, use of market reports, etc.

(9) Methods of coöperating with government agricultural department. Use of government reports.

(10) Drainage and sanitation of rural regions.

III. Socialized geography as developed in this volume,
page 281.

IV. Social studies.

(1) Brief history of the development of our industrial and political institutions, with emphasis on present conditions.

(2) Elementary civics, with emphasis on concrete local government, to show the rights and duties of citizenship. Practical ethics developed by means of school and class relationships.

(3) Chief rural community conditions and problems looking towards betterment.

V. Physiology and hygiene of the practical kind previously indicated.

VI. Vocal music; some drawing, looking toward developing ability to lay out plans of buildings, of fields, grounds, machinery, etc.

INDEX

A.

Æsthetics, 246
 Agriculture
 competition in, 118
 education for, 295
 Angell, Pres. J. B., 184
 Appreciation, 246
 of educators, 37
 Arithmetic
 socialization of, 255
 elimination in, 255
 localizing, 259
 Association, neighborhood
 as cause of social disease, 136
 Articulation of training factors, 247
 Augustine, St., 205

B.

Bagley, W. C., 170, 237, 239
 Baldwin, 238
 Baldwin, Prof. J. M., 57, 91
 Balliet, Prof., 244
 Bedford, Rev. R. C.
 on graduates of Tuskegee, 31
 Blackmar, 35
 Bolton, Prof., 171
 Booth, Charles, 143
 Botsford, Prof., 203
 Brace, C. Loring, 147
 Brownlee, Miss, 191
 Bryce, James, 207
 Bushnell, Prof., 130

C.

Call, Supt. A. D., 160
 Carnegie Foundation
 bulletin on wages, 39
 Carp, Principal, 49
 Cattell, Prof., 185
 Chamberlain, A. H., 243
 Chamberlain, H. B., 155
 Channing, Prof., 207
 Children, wayward
 reclamation of by special training, 153
 Church, the
 responsible for religious training, 199
 evils of supremacy, 202
 evils of fusion with state, 204
 American plan of separation, 206
 Cities
 population of, 116, 219
 Coe, Prof., 200
 Community interest
 as criterion in education, 217-222
 Compensation of teachers, 38
 Consumption
 economics of, 121
 education for, 121-128
 and spiritual necessity of training for, 125
 Continuation schools, 290

- Coöperation,
training for, 91
- Crime
want of vocation as cause, 144
- Criterion
consideration of, 253-255
of subjects not identical, 253
- Criterion, in education
location of, 217
for information, 230
- Culture
meaning of, 175
place of in race evolution, 177
general, impracticable for masses, 183
a non-traditional education, 179
- Curtis, W. E.
on influence of Tuskegee, 32
- D.
- Dabney, Pres. Charles W.
on education in South, 27
- Davies, G. R., 259
- Democracy
demands of on education, Chap. 5, 78 ff
significance of, 78
meaning, 80
specific requirements of on education, 83 ff.
growth of, 79, 80, 83
- Dewey, Prof. John, 48
- Discipline
meaning of as an end, 166
general discipline, 167
general discipline psychologically untrue, 167
and social theory, 173
- Dodge, James M.
on industrial training, 34
- Dreber, Pres. J. D.
on negro education in South, 27
- E.
- Economic interests
and education, 104-128
sociological significance, 104
determine motives, 105
determine other social changes, 105
basis of callings, 107
vehicle of progress, 120
tendencies of science, 118
- Economy
need of in consumption, 121
- Education
and social structures, 8
reaction on, 35
and democracy, 78 ff
non-democratic, 75
of women, 97
right to vocational, 94
for production, 104
in consumption, 121
pathological demands on, 129-160
to prevent social diseases, 146
the social end and other ends, 161
traditional disadvantageous, 171
social theory of, demands, 173
among primitive peoples, 179
Spartan, 181
Athenian, 181
feudal, 182
state, and religion, 186 ff
criterion in, 211-222
subordinate ends of, 224
as expression, 245
conclusions for from social pathology, 258

Educational transformation

need of, 1

cause of, 4

Educational progress, and change, 3

Elimination of pupils from schools,
41 ff

Eliot, Pres. Chas. W., 238

Elmira Reformatory, 156

Elwood, Chas. A., 148, 154

Ely, R. T., 147

England

educational progress, 21

Environment, social

power of, 52

as opportunity, 59

Evolution,

race and culture, 172

F.

Falkner, Prof. R. P., 145

Fetter, Prof., 63

Fisher, Prof. Geo. P., 196

Fiske, John, 268

Fletcher, 127

G.

Galton, 101

Genius, 101

Germans

on American education, 16

German school courses, 290

Germany

vocational education in, 15

opinion of advance, 19 ff

Geography

socialization of, 281

Ghent, 87

Giddings, Prof., 53

Gillette, Prof. J. M., 76, 148

Gulick, Dr. Luther, 152

H.

Haney, J. P., 291

Hanus, Prof. Paul H., 208

on schools of Munich, 16, 290

Hall, Douglas,

on English Universities, 21

Harris, E. L.,

on German advance, 19

Harris, Dr. W. T., 201

Harvey, 50

Henderson, Prof. C. R., 47, 131, 135,
148, 154

Heredity

as cause of social disease, 134

and defective education, 138

Higgins, M. P., 243

History

socialization of, 262

what it should do, 262

bad conditions in, 263

poor texts and teaching, 264

reconstruction process, 266

organization of material, 272

Hodge, A. A., 196

Homes, poor,

cause of social diseases, 135

and school, hiatus between, 139

Howard,

Germany's progress, 20

Howe, 117

Hunter, Robert, 130, 147

I.

Individual, the,

society and, 53 ff

social constitution of, 57

Industrial education

too narrow for whole school

system, 12

and wages, 33

Industrial order,
 evolution of new nations into,
 115
 evolution of larger areas into,
 116

Information, 227

Initiative, 244

Institutions, social,
 division of labor among, 198

Intelligence
 function in race evolution, 178

Interest and school attendance, 48

Inventions
 being commercialized, 119

J.

James, and Sanford, 116

James, Pres. E. J.
 on German education, 19

James, Prof. Wm., 171

Japanese, the
 development and education, 22

K.

Kaneko, Baron, 113

Kant, Emanuel, 162, 163

Kean, Prof., 53

Kellogg, C. D., 131

Keyes, Supt. C. H., 222

Knowledge
 essentials of, 83
 physical, 83
 social, 87

Knowledge groups
 importance of, 227
 relative worth of, 228

Knowledge of
 self, 230
 nature, 231
 society, 233

Koestlin, 197

L.

Language
 socialization of, 274
 Lancaster, Ray, 148
 Lindsay, Prof. S. M., 140
 London, Jack, 87
 Lounsbury, Dr., 279

M.

Mass. Commission on Industrial and
 Technical Education, 34

Mass. Institute of Technology
 wages of graduates, 39

McMurrey, Dr. Charles, 234

McQueary, Supt., 156

Mathews, Prof. Brander, 277

Mill, John, 162

Morality and religion, 187

Moralization, 88 ff
 social rather than individual
 needed, 90
 training for self-government
 and co-operation, 91
 didactic, 235
 practical, 236

Morals

 education into without religion,
 191, 209

Moore, Thomas, 150

Morrison, 145

Munro, Rev. J. J., 132

N.

Nature
 knowledge of necessary, 86, 231

Neighborhood associations, 136

North Dakota
 bulletin of State Educational
 Association on teachers' wages,
 40

O.

- Occupational groups, 110
 - and crime, 145
- Odin, 101
- Opportunity in society, 59, 101
- Organizing principles, 242

P.

- Parsons, Frank, 9
- Pathological social conditions, 129-160
 - magnitude of, 129
- Perfection
 - as end of education, 161
 - criticism of, 163
- Penology
 - as object lesson in education, 156
- Person, 15, 22, 34
- Pestalozzi, 52
- Physiology
 - socialization of, 280
- Plato, 162
- Playgrounds, 151
- Pope Pius IX., 192
- Pope Leo I., 205
- Population and resources, 114
 - of cities, 116
 - stability of, 218
- Poverty
 - table of causes, 141
 - and social disease, 137
 - and want of vocation, 140
- Prevention
 - as remedy of social disease, 146
 - the doctrine of, 146
 - playground schools as, 151
 - vacation schools as, 151
 - vocational education as, 153

Production

- education for, 109-121
- importance of, 109
- intensification of, 112
- Programmes of study,
 - method of socializing, 211
 - socialized, 289
 - difficulty of construction, 289
- Progress and economic interests, 120

R.

- Race problem, 23
 - B. T. Washington, on, 28
- Ray, 239
- Reconstruction
 - the method, 214
 - need of depends on criterion, 216
- Reinsch, 43
- Religion
 - evolution of, 188
 - church responsible for, 198
 - distinction between religion and morality, 187
 - relation of school and, 191
 - a private matter, 195
 - state education and, 186-210
- Religious organizations could not agree, 193
- Renaissance, educational, 1
- Roosevelt, Theodore, 152
- Rural schools
 - course of study for, 295

S.

- Sanford, 116
- Schaff, Philip, 204
- School attendance, 41 ff
- Schools, vacation, 151
 - vocational, schedules for, 291, 295

Science

- and modern civilization, 172
- economic tendencies of, 118

Seeborn, 204

Self-government, training for, 91

Shank, Prof. Burgess, 256

Simons, Maywood

- education in South, 27

Skill, lack of and social disease, 138

Sloan, Supt., 154

Small, Prof. A. W., 64, 90

Smith, Prof. D. E., 257

Smith, Engene, 131, 159, 175

Smith, H. B., 197

Social demands on education, Part 2,
53 ff

Society and individual, 53 ff
as opportunity, 59

Society

- knowledge of necessary, 233

Social diseases

- magnitude of, 129
- causes of, 133
- defective social structure, 133

Social environment

- rôle of, 53 ff

Socialization

- movement for, 1
 - meaning of, 6
 - problem of, 211
 - summary of principles, 212
 - of programme of studies, 223-252
 - of subjects, meaning of, 253
 - of arithmetic, 255
 - of history, 262
 - of other subjects, 274
- Socialization of education
- methods, 211-298
 - reconstruction as method, 214

Social structure

- and individuals, 66
- and human interests, 63
- and material welfare, 59
- defective and social disease,
133

South, the

- care of, 23 ff
- backwardness of, 24
- education and industrialization
of, 25

Specialization

- in society, 63 ff
- in education, 72

Spencer, H., 162, 177

State

- and church, separation, 202
- evils of fusion with church,
204
- American plan of, relating to
church, 206

Story, Judge, 192

Summary

- of principle of social demands
on education, 212

T.

Teaching

- method of for three R's, 226

Thomas, Prof. W. I., 54

Thorndike, E. L., 44, 170, 184

Tools of learning

- their importance, 225
- method of teaching, 226

Training factors

- articulation of, 247
- ideal plan of articulation, 247
- illustration of plan, 250

Training groups, 224

Tuthill, Judge R. S., 155

U.

- Utilization, 239
 - need of, 259
 - as vocational technique, 240
 - as organizing principles, 242
 - as initiative, 244

V.

- Vacation schools, 151
- Veblin, Prof. T., 172
- Vocation
 - want of cause of poverty, 140
 - want of cause of crime, 144
- Vocationalization, 7
 - as dominant educational end, 10
- Vocational bureaus, 9
- Vocational education
 - meaning of, 7
 - and industrial education, 11
 - some accomplished results, 14 ff
 - in Germany, 15
 - results in South, 30
 - right to, 94
 - and the talented, 100
- Vocational movement and concept, 1

Vocational schedules

- for elementary schools, 291
- course for rural schools 295
- Vocational technique, 240

W.

- Ward, Prof. L. F., 59, 84, 101, 108
- Ward, W. R., 238, 339
- Washington, Booker T., 146, 176
 - on negro problem, 28
- Waste
 - in consumption, 122
- Welch, J. S., 234
- Wells, H. G., 117
- Whitney, Prof. W. D., 275
- Williams, Roger 206
- Wilson, Pres. Woodrow, 185
- Wines, Frederick, 145
- Winston, Pres. Geo. T., on educa-
 - tion in South, 25
- Wolff, L. E., 275
- Woodward, Prof. C. M., 42
- Wright, C. D., 144

Y.

- Young, Supt. Ella Flagg, 250

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